20-21 Information & Communication Technology Advisory Board 11/6/2021

Dr. Brian Dozer 03:31
All right, good morning. Good morning.

Aurea Lawson 04:43
Just waiting for a few more participants to join in. I know that we do have first our college panel, and then we will have our industry panel, I just want to send a reminder on the screen, you do want to make sure that you are muted during the panel sessions. And if possible, if you could turn your camera off just for that session, we want to make sure that the panelists are seen, and their faces not buried within the remaining cubes, I guess. And then if you do need to change your name, make sure your first and last name is on your frame. And so you'll see your name at the top of the participants list. And then you can hover over where it says more and then click Rename. And then for the check in process, you can just put your first and last name and your title and school in the chat box. This will help the other participants know who you are if they would like to network. The chat box is open. If you would like to privately message another participant with any questions you may have. And then I will turn it over to Dr. Dozer. He is the president of Vital Link OC.

Dr. Brian Dozer 06:37
Alright, thank you very much, Aurea, and welcome to everyone. As Aurea said, my name is Brian Dozer for those of you that I have not met, and I'm the president of vital link. One reminder, did you mention the closed captioning, Aurea?

Aurea Lawson 06:53
No, I'm so sorry.

Dr. Brian Dozer 06:54
Okay, so if you want closed captioning or subtitles, we have that access. In the lower right, you can just click there's a CC button or a subtitle button, you can get that it's actually as somebody who started out as an intern at TV stations, when back in the 80s, when they were trying to figure out how to do closed captioning and you literally had someone there trying to type it all out the aid. This is really pretty amazing. So I was looking at it earlier. And it's really quite accurate. So anyway, welcome to the ICT advisory board, we're very happy to have you here. You know, obviously in this day and age, everything has to be virtual, we're very excited that we were actually able to create a platform and find a way to do these virtually. Our registrations are actually up from what we had in person last year. So we're very excited about that. We have a great group of college panelists who are going to talk to you we have a fantastic group of industry folks as well. And we're very excited to do this. Obviously, everything right now is in zoom. When everything is over, for all of the advisory boards, ultimately

what's going to happen is everything's going to be uploaded into the vital link app. And if you have not, if you have not registered for that yet, we are going to give you the links and everything to do that, at the end of the day in the presentation for that. The beauty of that for you. And while we're calling it an app, it also is available on through a browser. The beauty of that is that all the recordings, all of the documents from our colleges, all the documents from our industry participants will be uploaded back into that and you will have access anyone will have access. So if you have you know someone that you that is a colleague that was unable to attend this, they will have access to that for the rest of the school year. We've set this up as what we're calling communities. And so the community remains available open for anyone who registers for the rest of the school year. We know there's been not so much with teachers and adults or with students, there have been some questions about, you know, registration for that and privacy and things of that nature. Just rest assured any email addresses that you because you do have to provide an email address to create a login for that along with the code from us. We're not reusing any of that for all of that is vital link property based off of our license associate. We're not using it for anything other than reaching back out to you about anything that has to do with today. So real quick, I do want to share with you what that looks like. So can you see this? Can I see this? Okay, so this is this is the Vital Link app. It is available on Apple devices as well as Android devices. This is the desktop version. And when you come in, you'll see a calendar. So if we are running an advisory board as we are today, you could actually, you all have the zoom link, but some would come through the platform and actually access the live stream. So every time we do an event, and we're doing nine of these over the course of the year, they will be up, they will be accessible here on the calendar. And then what we are doing is, each of the sectors that we have will have its own area. So here for ICT, if you were to click into it right now, you would see that live stream is here, but also all the documentation that we provided for the event. So the agenda is here. And there's some information here about Telecomprehensive Solutions, which is one of our partners, and Brian Anderson is here. As our as our moderator today, the information from all the colleges is here. The BIOS for all of our speakers are going to be here. And then links to all of everyone who's participating, all the colleges and all the businesses who wanted links that will be posted here as well. Then after the event will take the recording will take the transcripts, we are recording, right Aurea. Okay, we'll take all the we'll take all the transcripts, the recordings, and all of that will be uploaded back in here. And we know it's important for our teachers and instructors to have access to this. But we also understand that not everyone can come exactly when we're holding the event. So everything will be here. And anyone who wants to go back and view this video, or go through any of the links or look at the BIOS or anything, all of that will be available there. Okay, so here's our itinerary for today. I'm going to turn it over in just a minute to Brian Anderson. Obviously, we're in the welcome part. First off, we're going to have college panelists. And then at the top of that we actually had Jason Sam, who's going to present something, and then we'll talk to all of our college panelists, and then Charlotte Augustine, who's the ICT regional director will provide an update, then we're going to do a short break. For 10 minutes, we'll have you stay online. This is the main zoom, we're not doing any breakout sessions. And then we'll come back and we'll do the industry panelists where we'll talk about trends, skills, etc. And then a final q&a. Feel free to put any questions or anything in the chat, if there is anything that you need, or anything that you have a question about. And with that, I will turn it over to Mr. Brian Anderson. And he'll take it from this point.

Brian Anderson - Telecomprehensive Solutions 12:54

Good morning. Thank you, Brian. So we are going to get started off with our college panel. And we'd like to take a moment to have everybody that's going to be participating as panelists to introduce themselves. As you do. So please include your name, the title and the college that you're with. And let's go ahead and start with Brandon Brown. Good morning, everyone.

Dr. Brandon Brown 13:13

My name is Dr. Brandon Brown, and I'm a CSP CTE, cis cyber. We have like three or four different programs at coastline college. I have been there about three years now and excited to be here. Thanks for having me.

Brian Anderson - Telecomprehensive Solutions 13:27

Thank you for joining us. Thanks, Russ.

Russ Alizadeh 13:31

Yes, good morning. Yeah, this is us, Russ Alizadeh. I'm from Cypress College. I'm the full time faculty. I've been with them for four years. And I teach cis cybersecurity, Cisco Networking and some other programs.

Brian Anderson - Telecomprehensive Solutions 13:46

Fantastic. Thank you for joining us, Anna.

Anna Carlin 13:50

Hi, good morning. My name is Anna Carlin and I'm a cis instructor at Fullerton College. And I teach mainly the cybersecurity classes.

Brian Anderson - Telecomprehensive Solutions 14:00

Awesome. There's a lot of movement in that sector specifically these days. And Diana.

Diana Rochat 14:07

Good morning, everyone. Thank you for having me. I'm with Golden West College. I'm the outreach specialist for our business and Career Education Department. So disclaimer, I am not a specialist in any way in ICT, but I'm here representing the college.

Brian Anderson - Telecomprehensive Solutions 14:22

Fantastic. Welcome, Pam.

Pam Barvarz 14:26

Hi, I'm Pam Barvarz by pH cis courses at Orange Coast College. And I do teach web design courses that are department offers.

Brian Anderson - Telecomprehensive Solutions 14:41

Fantastic welcome, Alex. Yeah. I'm sorry Alex doe. All right, Alan, why don't you go ahead and introduce yourself while we wait for

Alan Foote 14:59
I'm sorry about that. Yes, my name is Alan Foote. I am a Computer Information Management instructor at Saddleback College. And I teach a variety of different courses at Saddleback, in the CME program, cyber security, networking, programming, etc., etc.

Brian Anderson - Telecomprehensive Solutions 15:17
Welcome, Alex, do we have you on as well? All right, we'll go ahead and skip over to you for the time being here.

Hugh Nguyen 15:27
Hi, my name is Hugh Nguyen, when I teach at Santa Ana college, part of the computer science department. We have it in cybersecurity pathway.

Brian Anderson - Telecomprehensive Solutions 15:38
Fantastic welcome. And for those who aren't familiar with me, my name is Brian Anderson, I am the founder of Telecomprehensive Solutions. We are a strategic technology and telecommunications, consulting and brokerage firm. So we do work in the industry with private and public businesses, including nonprofits to help them align their technology strategies and procure whatever technologies need to get implemented within their respective organizations. So very excited to have the opportunity to speak with all of you about the amazing field of ICT, and how dynamic the opportunities are here. So I'm going to go ahead and start off with a general question. And I would like for this one, if Brandon, Anna, and Pam could all kind of weigh in on this? What early steps should students take after high school in order to be successful in ICT courses in college? Pamela, let's go ahead and start with you.

Pam Barvarz 16:31
The should after high school. They should check as they should talk to your counselors. Make sure they have they know what their goal is for the future. And also check the job opportunities of the areas they want to get into.

Brian Anderson - Telecomprehensive Solutions 16:55
That's great advice. Brandon.

Dr. Brandon Brown 16:58
I'm actually seeing students before they graduate high school getting involved in cybersecurity and it we have a lot of outreach programs here at coastline through the Jin cyber grants that we've won through Toby West Gen cyber girls outreach that she does for young ladies. So I actually think it's, it behooves them to get involved before they even graduate high school. For those that graduated high school and they're looking for an in, I think they have to get active in the community, not just in the educational community, but the overall it community professional organizations, and just explore the pathways that are out there to break into the industry.

Brian Anderson - Telecomprehensive Solutions 17:50
Absolutely. Anna, what thoughts do you have to add?

Anna Carlin 17:54
Um, what I would like to add is to encourage the students to continue learning. And so in high school, you're kind of exposed to a couple of major areas in computer information systems, but not all of them. And so we try to encourage them to be more curious about how computers work to give a better sense of the areas that they might be most interested in pursuing. Also do I'm in cybersecurity, so we do a lot of competitions and summer camps, much like with Brandon was mentioning, so that they can start zeroing in on the areas that they are most interested in, start developing some skills and just give them a better perspective of the career opportunities out there, especially in cybersecurity.

Brian Anderson - Telecomprehensive Solutions 18:39
Fantastic, and just generally opening it up to the rest of the panel. What other early steps do you feel that coming out of high school should be taking for themselves in order to prepare to be successful for ICT courses, specifically in college?

Russ Alizadeh 18:57
Brian, if I may add, that we also emphasize soft skills for a student, we work very closely with Anaheim unified and they have five C's. And that's an area we take it to the next level. And we have developed badging and macula pads in those areas. Time to also the self discovering.

Brian Anderson - Telecomprehensive Solutions 19:18
Perfect. Anyone else want to weigh in? All right. And I would agree from the industry perspective that employers really do value and look to people who are self motivated, and have developed their own portfolio of projects and things that, you know, was a curiosity, something that you've run into that you've thought, well gee, I wonder if I could figure that out. And so taking that time, you know, personally to develop yourself is just absolutely so critical and ties into being more successful within your education career as well. Moving on to our next question, I'm going to tap into Russ Alex are Elon in queue for this one, what cybersecurity networking activities are you offering for high schools this year?

Russ Alizadeh 20:09
You have a very close relationship with couple of school districts in our area and we have a very strong tunings augment. So actively, I'm actually teaching two courses for the high school students in Garden Grove district. And we try to get them ready for our cyber certificate programs. So we offered them courses that covers cloud computing Linux, and also it fundamentals cloud essential and a plus and the Cisco. So those are kind of, you know, building blocks, so they can, you know, take the next you know, advanced cybersecurity courses.

Brian Anderson - Telecomprehensive Solutions 20:50
Fantastic. And Hugh.

Hugh Nguyen 20:55
Sorry, Brandon, could you repeat the question?

Brian Anderson - Telecomprehensive Solutions 20:57
Yes. What cybersecurity and computer networking activities are you offering for the high schools this year?

Hugh Nguyen 21:04
We're starting to work with a dual enrollment advisor and I work with the Santa Ana unified and see how we can get a pipeline and we're looking to middle colleges as well. So we just built the path it and cybersecurity pathway so we're slowly into implementing that as well. So

Brian Anderson - Telecomprehensive Solutions 21:27
awesome. Alan.

Alan Foote 21:28
Yes, I'm from Saddleback, which is in somewhat a little bit of southern part of the county. And we just this semester started up our what we're referring to is our early college pathway program, working with Saddleback Valley, Unified School District, as well as Capitol Valley High School and enrolling students in our cybersecurity program. Right now, I'm actually teaching a Python course it's involving students from both of those areas. And we intend on expanding it and offering it to a lot more school students, high school students and things of that nature. So we've got quite a little programs getting started, and we're just getting started, we see it expanding and being a lot bigger in the future.

Brian Anderson - Telecomprehensive Solutions 22:12
Fantastic. And it doesn't look like Alex has actually made it onto the call. So let's take a moment and introduce Alex Do, as well. Alex, could you take a moment and just introduce yourself, your title and the college that you're with?

Alex Do 22:25
Hi, this is Alex. And I'm a full time engineer at Google. And I'm also a part time instructor at OCC teaching JavaScript and JavaScript to which is a more advanced course of JavaScript. And I like the auto question again.

Brian Anderson - Telecomprehensive Solutions 22:46
It i think that that takes care of it. So you're working with Google and you are currently an instructor at Orange Coast College. And are you offering any programming through Google or through OCC specifically geared towards high schools this year?

Alex Do 23:02
No, we are gearing toward more like college level. Fantastic.

Brian Anderson - Telecomprehensive Solutions 23:08
And Are any of our other panelists. Do you have any programs specifically geared for cybersecurity and networking towards the high school level? Go ahead, go ahead and chime in on your own.

Dr. Brandon Brown 23:21
Yeah, we of course have our cyberpatriot program. We have hundreds of students through the Garden Grove Unified School District, Fountain Valley School District that participate in that. We're also on a grant that was awarded to National University down in San Diego to be a partner with them for the SoCal cyber cup, which is a competition that focuses on cyber defense for middle school students, high school students and this year, community college students as well. And to to bridge that over coastline college is the host for the Western Regional collegiate cyber defense competition, which is a pathway to get students at the community college level. Excited about cyber programs at four year schools like Cal State San Bernardino, Cal Poly Pomona, UC Irvine, so we're really trying to have that entire pathway from middle school all the way up through the four year colleges to to mentor students along that path in this in this domain.

Brian Anderson - Telecomprehensive Solutions 24:29
Sure, Brandon, I mean, can you just speak very briefly as to really the opportunity in cyber defense and cybersecurity in general and why this pathway is so pertinent at this point in time. And, you know, really what that labor market looks like.

Dr. Brandon Brown 24:46
Sure, well, the monkey wrench that got thrown at us was of course COVID. That's why we're here in zoom instead of looking at everybody in person, like we usually do down in Irvine, but I would have to say that the cyber security cyber defense sector has taken a small hit in the labor market over the last eight months from what I've gotten anecdotally from a lot of my contacts, but not nearly as bad as general IT. Overall, from what I've been hearing from the integration side of the house, is it going to bounce back? Oh, yes, it's going to bounce back, it's going to bounce back with a full head of steam. And I think we'll get back there probably within the next six to 12 months ahead of the rest of the economy. I'm very encouraged to see that a lot of employers and I'm excited to hear about the employer panel today to be honest with you, at their outlook on on the sector as well. Are they hiring only college graduates? Are they hiring two year, people out of high school? Are they hiring people with a two year degree, I'm still gathering data on all that.

Brian Anderson - Telecomprehensive Solutions 25:59
Fantastic. Anna, would like to share your programs that are currently pursuing computer science.

Anna Carlin 26:06
Sure, I'm I'm in computer information systems, which is slightly different than computer science, computer science requires a larger degree of math in their program. In computer information systems, we it's not as expensive as computer science, because we're teaching them to program as well as do web design, intro to networking, cyber security. And I feel like I'm forgetting somebody, and of course, the technician side of taking care of the hardware. So our associate's degree is 20 to 23 units, where

we have 14 units required of all of our students, which is giving them that foundation of Information Systems courses, that then they can start to specialize in a career track in any of those areas, because you're not going to like or excel in all parts of cis and having that foundation gives you a sense of where your interests lie as you go through the program. And then if you're not interested in associate's degree, we have certificates because we have professionals coming back that may have been laid off because of the pandemic or just looking to make a career change. They don't want a degree, I want to go in and take a few classes in a very specific area, and maybe change my career getting a different job or transition in my company that I'm working with right now. And so we broke off and made several certificates. The one nearest and dearest to my heart is the cybersecurity certificate. And there are three and they're stackable, meaning that the courses in the first one, that technician, which is 18 units, is the foundational type of classes and then go to the next certificate, which is looking at more intrusion detection and incident response as we've all moved online. If anything, having employees working from home has caused more security issues than we previously saw, as Brandon was alluding to, up until the pandemic we were experiencing 0% unemployment in our field, there are not enough people going into this field. And everybody thinks they need to be super technical to work in this field. We need a lot of different kinds of folks with different skill sets. And that's where these certificates are building on all of that. And in in all honesty, if there's something that our students is interested in that we aren't having panels like this, I can recommend them to go over to Cypress or to coastline because I know they have an area of specialization that we may not have that specifically fits what they're looking to do.

Brian Anderson - Telecomprehensive Solutions 28:50
Great. Thank you. Diana, can you talk to us a little bit about your cybersecurity and computer networking activities and the computer science classes you offer.

Diana Rochat 28:59
So we offer three programs that the students can choose from we have computer science, software development, and video game development was actually just revised recently. And so students will be introduced more to the Unity game engine. And I apologize, I'm just I'm looking at my notes here. So those are the three areas that we offer. Our program is more focused on Java and c++. So the students that do decide to do the associate's or the degree in computer science can choose either pathway. And in terms of the cybersecurity networking, just as everyone else we are working on expanding our dual enrollment offerings. At the moment, we're not offering anything related to cybersecurity, but our dual enrollment is growing significantly. And we're hoping that that's something that we can offer in the near future, but students can still participate in concurrent enrollment. Just as everyone else, they can take computer science courses at our college or decide to audit a course.

Brian Anderson - Telecomprehensive Solutions 30:07
Great. And Pam, what courses are you offering in computer science?

Pam Barvarz 30:13
We do offer c++, C sharp, Python, and Java. And those are our transfer courses. We also do offer web design courses, which they can actually get small certificates without having to add really necessarily

be transferring to a four year university. We also have another program in CIS, which is called vi W. Is this information warfare? And miryam? Watson, we'll talk about it a little bit more later.

Brian Anderson - Telecomprehensive Solutions 30:57
Okay, great. Alan.

Alan Foote 31:00
Yeah. Pam, thank you so much for bringing up the BI w business information worker, because that was sort of the thing I thought was getting a little bit neglected by the other famous speakers. We also have the same sort of programs with the cybersecurity networking, programming with Python, and Java and all the rest. But also our computer information worker is certainly an important certificate and program that we have. And one of the things that I think is sort of interesting is all the things that are going on with the cloud, and particularly Microsoft's cloud with Azure, and getting into Azure and talking a little bit more about software as a service. And their big product, of course, is office 365, excuse me, Microsoft 365, as it is now currently called. And that provides a lot of applications and things for students to really get an idea to learn about working on the web and working on the cloud, excuse me, and what that involves, and probably one of the big products that has got to be discussed when you start talking about office 365, excuse me, Microsoft 365. And all that, of course, Microsoft Teams, which are Oppenheimer just came out and said teams is going to be the dominant eye, it's going to dominate the IT industry for this generation. So we should be talking about teams, as far as far as all of our classes are concerned. And certainly try to incorporate that into our curriculum.

Charlotte Augustein 32:30
I completely agree with you. And in my presentation, I'll go over the big w worker, I had a lot of requests for that. And we can dive deeper into areas in which we can improve on it and expand on it. So adding different certifications to make our what we call now our bi w business information worker. More job ready with more opportunities. Thank you.

Brian Anderson - Telecomprehensive Solutions 32:55
Fantastic. And Charlotte, would you mind just introducing yourself as well in your organization.

Charlotte Augustein 33:01
My name is Charlotte Augenstein. I am the Regional Director for ICT digital media for Los Angeles and I am now supporting Orange County as my peers Steve with the camera retired. So I am helping out as much as I can. With the hopefully being adopted officially in September, but for now I am I am LA and then supporting OSI as much as I can, I will put in my information. And we can we can talk about ways that I can support Orange County, virtually as we're all virtual now, I have a lot of contacts and a great deal of experience and hoping to help each and every one of you.

Brian Anderson - Telecomprehensive Solutions 33:44
Awesome. Thank you. And Hugh, would you mind telling us about your programs for Computer Information Science or computer science classes?

Hugh Nguyen 33:54
Sure, I would like to share my screen just showing the brochure here. So we also have two sides of the house computer science and computer information systems. We start off with the IT Support Specialist certificate, it's transcripted. Now so students who are taking this class is pretty much following the objectives of comp Tia IETF and the comp to a plus. And moving on. It's also stackable. So if they take a couple more comp Tia courses, though, complete the it desktop and server operations and they'll be moving to the next last it certificate called it network and security operations. And we're trying to work with comp Tia trying to add maybe more cybersecurity and this one, but definitely we're working towards building like a security operation center. Then Jason Sim who's also online, he would like to do Would you like to share the other certificates that we have for our cis?

Jason Sim 35:05
Oh, yes, ah, for cis definitely. I'm a colleague of you, we have the database certificate at Santa Ana, where we teach SQL Server Oracle. We're trying to get MongoDB on board. We also we're also working on a data analytics certificate. So that's pending, where we're going to teach Python for data analytics. Because as we know that big data is in high demand right now. So also, we have the Help Desk enterprise systems, PC maintenance and troubleshooting. And we also have a CS transfer computer signs, where we teach Java, JavaScript, c++, C sharp, and the mainstream programming languages. So a lot of our students do transfer, you know, whether, in this particular program, so that's some of the programs that we do have?

Brian Anderson - Telecomprehensive Solutions 36:02
No, absolutely. And I think this is great that you're actually showing what the breadth of the areas of opportunity are between just programming skills, networking, security skills, cybersecurity skills, Business Information workers, the Microsoft suite, as well as other collaboration, you know, areas, you know, and I'm not certain, and one thing I would be very, are very, very curious to find out from anyone, or any of the colleges, or programs that you're working with, focusing in on more of those connective query languages like JSON, for API integrations and doing intraoperative programming between business platforms.

Russ Alizadeh 36:50
Brian, if I may add, we have actually Jason, kind of Cisco imposed on us. So now part of the Cisco Networking, Cisco, Jason, in a software defined networking and all that. So that's one big component. And also AWS, as far as being Academy, you know, Jason is one of the more popular scripting that they want us to use. And also in our college, actually, we have developed the dev sack up and DevOps certificate. And in there, we have a good deal of it JSON and other scripting, as well, as you know, kind of combining computer science programming as security guys, that's the future I think so.

Brian Anderson - Telecomprehensive Solutions 37:36
Okay, great. Sure. And then I'm just going to do a quick fire round robin on the next question here. Is it possible to successfully finish your coursework and ICT in an online course environment without having to set foot on campus or attended in person lab?

Charlotte Augustein 37:56
I believe so. Working hard towards what industry is doing now. So being able to self manage your projects your time and collaborate with your peers and leadership is so important and in today's world and moving forward. at

Alan Foote 38:18
Saddleback, we certainly have programs are all online. And certainly students never need to set foot on campus to be able to complete our cybersecurity and networking programs.

Dr. Brandon Brown 38:34
Go ahead, Pam, please.

Pam Barvarz 38:35
Yeah, go into post college. Some of our programs can be completed 100% online, their web design course program can be completed online, completely.

Brian Anderson - Telecomprehensive Solutions 38:49
Fantastic.

Dr. Brandon Brown 38:50
At coastline, all of our programs, all of our courses are fully 100% online and let me state this. They were online before the pandemic. We are with the oldest continuing education, outreach that we've been doing it that way through correspondence courses, before the internet since like 1976 is kind of how the college was originally designed, and the Orange Coast district. So I know a lot of my colleagues had had some problems, maybe not in this field, but in the traditional liberal arts and sciences and everything else moving online. We literally had to flip the switch and we were done. Great.

Brian Anderson - Telecomprehensive Solutions 39:37
And let's go ahead and I believe we've got just about five more minutes or so left. So I want to kind of give some information that's going to be most useful to our students here. When they're thinking about planning out their their curriculum and you know, weighing those against their career goals. What are the average units that are required to get a degree or certificate in ICT at your college? And also what processes do you recommend for your students when they're transferring to a four year? Let's go ahead and start back back at the beginning here. Brandon, would you mind weighing in on that?

Dr. Brandon Brown 40:11
Sure. So like most of the other California Community Colleges, I believe it's 120 124 semester units for an associate's degree. Within that it ranges from 24 to 36 credits, for specialization in cybersecurity, digital forensics, incident response, and testing things like that. We have several different tracks. For the certificates, we have certificates of achievement, which is up to about 12 credits, three, nine to 12 credits, three to four classes, and then certificates of accomplishments that go up to upwards of about that 24 plus credits. So that equates to about eight, you know, eight or nine classes for that. The

second part of the question was, I'm sorry, I forgot I didn't catch that was what processes do you recommend when transferring to a four year transfer to a four year that's my that's my do whatever you have to do to transfer to a four year I'm a big advocate of continual learning. Look at what colleges are going to align to what you were what direction you want to go into. I think the big colleges here in Southern California, for computer science would be, I would definitely have to say UC Irvine would be probably one of my top choices, Cal State Fullerton, Cal Poly Pomona for cis Cal Poly Pomona, Cal State San Bernardino. I know it's a little bit out there. And also on the computer science side, UC Riverside has a great program. So I my advice is Do whatever you have to do to get into one of those programs.

Brian Anderson - Telecomprehensive Solutions 41:51
Absolutely. And for the rest of the panel, if there are any variations and the coursework in credit load requirements for your programs. Why don't you go ahead and tell us about that real quick. And then also, whatever your recommended processes for transferring to a four year would be, Russ, would you mind weighing in real quick.

Russ Alizadeh 42:13
We have a two kind of students and population one at the high school students, they have a totally different kind of mindset and goal. And also we have lots of adult learners. And they totally have a different outlook, for example, computer science, we have the traditional computer science, the lots of math, high school student love it, then they move on to UC Irvine of Luton, but then the adult learners delve into that too much that some of you don't want to transfer, some of them don't want to do all the math. So we have given them the option, and also has been the mission, you know, we give him a guided pathway and stackable certificates. So we started with the 12. And then they can go to the next level, which is the 24 level certificate. And after that, then they can get their associate. And after that, then they can move on to the four year taking some general education and other so it's a good idea for especially adults though in a given that guided pathway. So they have a choice.

Brian Anderson - Telecomprehensive Solutions 43:07
Great, thank you, Anna.

Anna Carlin 43:10
Um, one of the things that we're working on is trying to articulate as many classes as we can to the four year school. So I'm going around and I'm emailing, not knocking on doors anymore. And taking a look at where it makes the most sense to articulate our classes to the four year schools. But what I also do is bring in the instructors using zoom from the four year schools that have specialized programs, and our students will log in and learn more about their programs. And we talk about what will transition from Fullerton over to that school because each one of the schools, the four year schools have their own twist on cybersecurity especially. And you can see where they excel and they have focus and if that's an alignment for where you want to go. It's great to know that now and how to position yourself best at the community college before you transition to the four year school. And the other thing too is we get them interested in competitions like Brandon mentioned Wr ccdc of getting a team together in a really short timeframe to secure a network which in some parts of our world in cybersecurity happens every

day where you're trying to secure a system while your adversary is trying to get into your systems and compromise it and seeing how well do you do and realize that you're not going to know everything, but you need to know how to go figure it out or what resources you need to tackle the task in a timely manner. So there's a lot of things outside of the classroom, as well as inside the classroom.

Dr. Brandon Brown 44:44
You know, to echo that, if I may real quick what Anna's talking about, because Anna was one of the four forefathers of Wr ccdc it during its creation like what 12 years ago or so. You're doing this all while, all the while our sponsors who are hiring who want to hire you are watching you perform these competitions. So these extracurriculars are not just a way to gain skills, it's also a great way to grab a foothold to your first job.

Brian Anderson - Telecomprehensive Solutions 45:19
You know, and I think that that's a great kind of concluding thought, just in the interest of time, we are going to need to wrap it down here. I think that critical reasoning and application of investigating, you know, that information, figuring out that pathway is so important for students to remember, as well. Looking at the atmosphere of industry partners that are tied to any individual college, who are those corporate supporters and a large employer organizations that that a school may have relationships with and can kind of open that pathway into prospective employment with them. Every individual College has different relationships, you know, in those areas, so that's definitely something to pay attention to. And for our panelists, if you wouldn't mind just in the chat, since we are going to have to wind down this panel. If you do have internships available for any college students, or for anyone after graduating college, if you could just put that information in the chat so that our students have that available. Any links to any internship programs that you have, just go ahead and put that in the chat. And that way our students can investigate what those opportunities may look like and where those career paths are. So thank you all for your time today and for your contributions to this panel and for making, making it easier for our students that are joining in to understand really what those opportunities are, what the requirements are, and how can they can be most successful in their education journey.

Aurea Lawson 47:07
Yes,

Dr. Brian Dozer 47:10
I'll let Aurea go.

Aurea Lawson 47:12
I want to thank the college panel for allowing their time to provide that data information and coursework end of the semester has been a big change for all professors and instructors. So thank you for the update.

Dr. Brian Dozer 47:31
Okay, and with that, we're running a little bit ahead of schedule. So we're going to turn it over to Charlotte Augenstein. So Charlotte, you want to take over?

Charlotte Augustein 47:42

Yes. Hi. Well, good morning, everyone, I'm so happy to be here to talk to you about some amazing things that are happening in LA and in Orange County. So as I mentioned, I am primarily in LA. So a lot of things I'll show you are things that are happening in that region. transferrable already happening in Orange County as well. So I like to call my presentation, the evolution of the workforce, and really, the workspace for 2020 and beyond. Here's my information so that you can reach out to me personally. So prior to COVID, only about 36% of IT industry worked remotely full time or part time. And businesses were steadily increasing the opportunity and the popularity of allowing the virtual workspace for their employees. But since the workforce virtual environment and we're seeing that many of the companies are not going back to your standard brick and mortar anymore, they will be in a hybrid environment and or allowing certain groups to work remotely moving forward. And these companies are companies like Microsoft that are going to virtual and having worked for them and amazing campus that they had. It's quite interesting because my peers are former peers that are they're saying it's just a ghost town. So changing employees, I guess. So let's move forward. All right. I wanted to show you a quick snapshot of what the, the AWS pathway looks like, for Los Angeles. And you'll see you'll start out as a foundational your cloud. Cloud, excuse me, practitioner, we now have Azure as well as AWS. But this is just an end, it's it's very similar, but I wanted to just to give you an overview. And you'll see within one year, they can go to an associate level, either solutions architect or developer. And we are coming up with different stackable certifications as well. So one thing that I've heard listening to our former presenters is, stackable certifications are very, very well received an industry. And if you can back it up with ways that you've done that, or in your interview, show examples, that increases your opportunities for an internship or employment. One of the areas that are very, very much needed is your heart in your soft skills, I can't I this is something I think that should be worked with, on your K through 12. And then obviously, as you as you go into community college or four year, they just need to be improved upon. So communication is key, especially if we're in a virtual environment, being able to communicate with your peers not feel left out and isolated, which it happens at all ages, not, not your 18 to 22. And 98% of companies use Microsoft Office, or Microsoft 365. That is in high demand and is definitely needed, being able to navigate on multiple virtual platforms. So zoom teams, blue jeans, there are many out there, but being able to manage your meetings, attend support are huge, having flexibility, with your schedule and or your job role, you may be asked to pivot quickly to support a peer who might be on vacation or who was sick, being able to show professional leadership, no matter what age you are, what role you are having the motivation to learn and to do things well, and being able to think outside the box and do problem solving, teamwork, time management, that is so important, working remotely, being able to complete your assignments or tasks in a timely manner. And then that also goes into your work ethic. So I wanted to show you some salaries. And this is very eclectic, you know, a data architect will take you many, many years to achieve, but it shows you some of the salaries and these are these are average, you can make much more than 128,000 for a data architect, cloud engineer with 10 years experience security data software developer multiple levels and you know, you can do a junior developer which average is $60,000 and going all the way down to help desk help desk is a great way to get started in the IT world. And that goes back to those other the other screen I had which was your customer service, your communication, your empathy when somebody is having an issue, letting them know that you you understand their frustration, and you're there to help them. I wanted to bring up

artificial intelligence, because it is it's here, um, it's it's being utilized every day, whether we know it or not. And there are benefits and there are also some uncertainty with using AI. I want to show you some positions and opportunities for AI in Los Angeles. We are building 13 different pathways, certifications. So trade off. And you'll see that these are just some of the roles and these roles are evolving every day. So what's your take on this? Searching for maybe quickly you wanted to search for a dress or something and you'll see all these different emails pop in or Fox News that will say, here's what you're looking for. So they're watching you and they are trying to make it easier for you. Some would say I wanted to talk about the business information worker I had a few emails asking if I would go over the big You, worker. And what you see here is a list of the one to three unit classes that are taken to get you to that that certification as a really what it is it's it's a Microsoft Office Suite certification. Anyone who does this is guaranteed to find a role in it virtual environment that we just talked about the huge Salesforce for CRM environment would be very, very lucrative. And I wanted to bring up something that we do to increase awareness to, to build a pipeline of students that want to get into the cloud world for exposure, I recommend this for our K through 12, as well as those that are in our community college are looking to go back and do a skillset refresh. So we have an event called Cloud day, which all of you will be invited to, I will send out a link for registration for your for yourself and or your students. This year, it's December 12. It's 100%. Virtual, it is a free, free event. It's an all day event, we typically start the kickoff with the keynote speaker. And then we go into panels. So we talked about what kind of roles Would you be able to experience in if you went on a cloud pathway. Now when I say cloud, you can be a systems administrator, you can be an architect, you can go into DevOps, there's a there's a ton of different sub pathways, if you will. And so we talk about those and what it means. And then we do breakout sessions. So we go into topics of diversity in tech, we go over Azure, or AWS, we talk again, about CRM, or in this example, it was Salesforce, we do hackathons. So you can do a hackathon for a few hours as an introduction. And then in the spring, we do a full on hackathon. And also we we talked about, you can give them all the all the certifications, and the technical side, but there's so much more. So they need to be job ready, they need to have their, their resumes ready, they need to know how to present in a, in an interview, whether it be an individual one to one interview or a panel interview, they need to know how to show their work and or their technology skills or talk about it at the very least. And then they need to also be able to present what pathway they want. So we talk about all this and so much more. But I want to just to give you an idea of what we do, and include you in our event in December. And then maybe we can make it even like a multi region. So we do have the Bay Area who's just launched their cloud very strongly joins us as well. I want to say just some metrics. This year, we have over 1000 students that have signed up to take the cloud pathway, so to speak, for both AWS and Azure. And we have had, I believe in the few years that we've since we've kicked off on the cloud certifications and the pathway, probably 600 plus that have gotten their certification and or certifications. And I have numerous success stories that I can tell you about employment, internships, mentorships, and things of that nature. And then lastly, before we take any questions, I wanted to talk to you I always like to end on three things, ways that you can increase your skill set or skill set, so very proud to offer digital matching through LinkedIn and LinkedIn learning. However, la has recently lost their funding. So Microsoft with their admission ship, about 25 million people to access a text sign up for free for 16 years and older and you must use your.edu email. So I'm 100% a believer that to work it and then also our students have learned. Cloud Day is December 2020 thing, regions get together. And we we talk about ways to improve things we bring in vendors and this point, we want to make sure you

know that certifications are free easily. So with that, that concludes my PowerPoints, and I am here if anybody has any questions. And it looks like we don't have any.

Dr. Brian Dozer 1:02:34
I think probably some people may have some questions, your audio got very garbled at the end. I could barely hear you. If you look in the chat. A lot of people were asking about it. So

Charlotte Augustein 1:02:48
Oh, I promise you I wasn't drinking coffee. My apologies for the internet connection.

Dr. Brian Dozer 1:02:53
Yeah, no, it's not. Yeah, it sounded like a bad connection. Where it was just it was just very garbled. So

Charlotte Augustein 1:03:02
my apologies. Next time I'll I'll go the old school way and plug in to the internet.

Dr. Brian Dozer 1:03:09
So there is a question in the chat that says how is Google Cloud coming along?

Charlotte Augustein 1:03:14
So we are not doing that in LA? I know one region in the far northwest, in California has started that but right now we're focused on the two top players, which are AWS and Microsoft Azure for now. Doesn't mean we're not going to expand in years to come. But that is that is where we are.

Dr. Brian Dozer 1:03:35
Okay. It looks like perhaps Carolina from IVC. popped on to ask a question.

Carolina Kussoy 1:03:43
Hi, Charlotte. Thank you, Brian. Charlotte, it's so good to hear that you're going to help us out down in Orange County. I'm really excited. I wanted to ask with regard to carrying caring for our strong workforce program funds that we've been allocated, you know, different colleges get different funding in our college. Really, we at IBC, we want to focus on supporting certification for our students. I guess my question is, how do we work with our certification partners like certiport, to help us in this time of COVID? What we cannot, we cannot do certification on campus because of our challenges with, you know, social distancing. Our contracts are set to expire this year. And if we don't use those seats, those licenses, we lose them.

Charlotte Augustein 1:04:37
Yeah. So what we found many of the companies that you mentioned and others have pivoted to allowing the virtual test taking was some modifications. You may have to have your camera on, you have a certain time limit. I'd be happy to schedule a meeting with them and you we should be able to extend those vouchers. so to speak, because of, you know, this unforeseen environment that we currently are in, I have not found anybody to be a hard No, you can't, it just takes some just takes a little

talking and presenting the added value, and why but stackable certifications are so, so well received within industry. And, you know, it used to be you needed a four year, obviously, a four year will get you further faster. But it's really what you know, and who you know, that knows what you know, to get you into the IT world, because there are more jobs that need to be filled than there are people to fill them,

Russ Alizadeh 1:05:42

If I may, if I may add to that we had the same challenge. So what we did, we did some arm twisting and negotiation with person beer, and we paid them a little bit extra. And then we converted over on site Watson's to online so students could use it.

Charlotte Augustein 1:05:59

Yeah, happy to work with you, Carolina or anyone else on this call that are experiencing the same type of issues. We've seen that across the state. But more so than not, I believe that they as long as you make that initial reach out, they should be able to work with us. And so we can get out on the calendar really quick.

Dr. Brian Dozer 1:06:22

All right, do we have any other questions for Charlotte or for any of the colleges for that matter?

Russ Alizadeh 1:06:31

I had a question I put in chat. And if I may ask if you'd like me to Sure, go ahead. The AWS Academy and also AWS educate, and I'm using both of them. And they have many things in common. And I like to get Charlotte start on that to see if there's any preference over one or the other Academy has some limitations, educate a give you a like $50 student credit, they can use services, you have more freedom, I don't know if there's any recommendations and thought on that.

Charlotte Augustein 1:07:03

so this is we actually had a meeting on this on Wednesday, in the Los Angeles region. I know the berry, Eric Bay Area is very much into the Academy. It's a very strict curriculum that they promote. We, in Orange County do educate. But we are trying to pivot to allow each college to tweak what they're doing. So that their faculty feels comfortable. So the jury's still out on which one is better. I think it's kind of like the flavor of vanilla or chocolate. You just have to pick what works for you. In LA, though, we have a very, very strong, cohesive collaboration amongst the 17 of the 19 colleges that are currently teaching the cloud certification pathways. And we are working to review the curriculum and see how, and if it's, it's, um, you know, we want to go the academy route. I know in the Bay Area, they're experiencing some issues and challenges. And honestly, they're both good, you see success with both. If we could just take them and merge them together, we would have made easy,

Russ Alizadeh 1:08:20

actually, that's a little secret that they told us on the site, you know that they're going to merge them. It's just a matter of time.

Charlotte Augustein 1:08:28

That would be awesome. It would take a lot of the hours of meetings that we have talking about, you know. Yeah. And then with Microsoft Azure, we've just kicked it off this year, and every class is 100%. Full, that we have participation from both AWS and Microsoft, to support us with professional development, providing insight. And, you know, with AWS, they've, they've really stepped up to help and we do a lot of boot camps. So let me I didn't mention that if we have time, or do I talk too much.

Dr. Brian Dozer 1:09:05
No, go ahead. Thank you. So we're actually running a little bit ahead. So still awake.

Charlotte Augustein 1:09:12
Okay, so we have a lot of boot camps available for both faculty. And then we do them for students to prep to take their certifications, and these boot camps, where we bring in K through 12 faculty that want to basically be taught by train the trainer. And we go over, not just the basic fundamentals, but we expand on that. So as the faculty feels more and more comfortable with what they're teaching, we can then start to plan for additional certifications. And again, it goes back to that stackable option. And which is so so powerful when you're competing against many others, right or let's say you are not the typical 18 to 22 year old college student, and you're your company instead Are you you've initiated coming back to community college to upscale, right. So you're going from an on prem server to moving to the cloud. So you're want to save your job and you're being ahead of the game. And you're learning how to do this. And then taking the that information, they take it back to their employer, I went to, oh, let's just say East Los Angeles College, and I got my certifications, what we're finding is, that's a great way for marketing, and getting the employer to engage with us for internships and employment opportunities for students. I'm also working on a virtual platform for internships for students right now, for both LA and Orange County, and really trying to do an eight week cycle. So they learn a little bit about each of the project management within the cloud, administrative rights and privileges and managing within the cloud data migration in the cloud, and so much more and then backing it up with a digital badge. So not only are they getting the mentorship from industry, they're also receiving a digital Pat badge, which is validating what they've learned each week. So when they go out to, to look for an employee employment opportunity, they have tangible, recognized badging that they could refer to, and it's great talking points. Now I'm not saying they're going to come out, and they're going to, they're going to be, you know, 100% deep into different areas within the cloud. But what they are, is they're exposed, and they have great, great potential to expand on that. And and employers really, those that I've talked to, which are numerous, really liked that they're taking that that additional step. Now, I will say, Be careful. There are a lot of companies out there that are pushing digital badging now that are not industry recognized. So I'm happy to support you, there's some really great ones. But in every area, there's always those that they cost a lot of money, and there's no there's no success from them.

Russ Alizadeh 1:12:15
I have one final question, Brian, if I may, for each other. And it could be tied to become also as you Academy and do you have any contact or any recommendation, but at first I should take for Microsoft? No, no, yeah. As you your Microsoft Academy?

Charlotte Augustein 1:12:32

Oh, absolutely. Um, I work with them closely. I did come from Microsoft. spent several years there. So if you want to connect with me, offline, I'd be happy to arrange a meeting with their educational team, they are local. And I wanted to bring something up when we talk about our K through 12. Real quick. There's a program called my Microsoft innovative educator, it's Mia. And I would be happy to put on an event. It's a 16 hour training for faculty. And what they do is they train the trainer. So this as we talked about meeting the skill sets within the Microsoft Office Suite, this will allow educators to work with students using a platform that's for free to get them ready into the industry world. And so anyway, um, if there are there any more questions? I mean, I could talk all day. Thank you so much. And I have the passion for giving our students the opportunity for success no matter what path they choose. And I really appreciate the opportunity to be with the OSI team.

Dr. Brian Dozer 1:13:47
Thank you very much. And we'll get Charlotte's, for everyone. We'll get Charlotte's presentation, and we'll upload it into the app. And then, Charlotte, for anyone who may have questions for you. Can you post your email address in the chat just so they have it?

Charlotte Augustein 1:14:03
Yes. Yes. It's really simple. It's charlotte@glendale.edu. They are my host college, and then I put in my phone number. Because a lot of times, that's the best way to reach me, and please let me know anything that I can do to support you. I am I'm all in.

Dr. Brian Dozer 1:14:23
Okay, wonderful. And then and then I guess this is probably a more general question. And Carolina asked how many colleges are returning to normal campus operations next spring.

Charlotte Augustein 1:14:35
So none. We are virtual until June of 2021.

Dr. Brian Dozer 1:14:44
At least right?

Charlotte Augustein 1:14:45
Yeah. Okay. It is a virtual environment. I must say though, um, the students, they, they're okay with it. For the ones I've seen. Um, I just highly recommend that they stay engaged and employees choose something about all the industry out there, stay engaged. And which goes back to that collaboration and communication. So you feel as though you're part of a team, even though you don't get to see anyone. Now, that could be so hard. But they're doing great. And are you know, I mean, it's a little interesting. We were really worried about our cloud day last year when we did it. It was phenomenal. So students are dying for the content and the information, they are just grasping, when can you do more, and I didn't even mention the Saturday morning, students get up at 9am. And we we do, we do AWS training and boot camps, we do with this. November 14, we have Microsoft, it's called action and Azure. So we're bringing in industry folks to talk about careers within Azure. And then we go into real in depth on how to build your business brand, your personal brand, the difference between a business page on

LinkedIn, and your personal page, how to build out your sphere, how to ensure that you're marketing yourself in that two to three minute elevator pitch. Those are so important.

Dr. Brian Dozer 1:16:17
Wonderful, wonderful. And I see Kelly asked the question about MIE and and a couple people posted the link. So thanks to everybody for doing that.

Charlotte Augustein 1:16:26
Yeah, I will set that up. And we can do a virtual MIE training. Just maybe if you can catch that information, and then we can work on that together. Yeah.

Dr. Brian Dozer 1:16:36
So So what? Yeah, so what I would say for any of our K through 12 educators are on here. If you're interested in that, send Aurea or me an email aurea@vitallinkoc.org or Brian@vitallinkoc.org. And then, one last question. Brian Anderson asked, Are you doing anything with big data? Or analytics?

Charlotte Augustein 1:16:58
Yes. So Mt. sac is our community college in LA that has kicked off big data, doing quite well. In the introductory, we are working on that with LA City about that the ring of the colleges, they're working on the curriculum right now for certifications and pathways. We've done some AI boot camps. The underlying foundation is Microsoft Azure. So the faculty, and this is faculty from all different sectors, not even just the IT sector. But numerous sectors came in, we did a boot camp on Azure. And then we started introductory classes on AI. And so actually, one of the things I'm doing is I will be doing an AI, faculty professional development. And then we're going to do subsequent trainings on when it goes into focusing on big data or if you want to go into analytics, so that they can start to feel comfortable as the curriculum is being developed.

Dr. Brian Dozer 1:18:02
Wonderful, Well, thank you very much, Charlotte, you were fantastic and offered us a lot of great information. Now I'm going to turn it over to Aurea. And it looks like

Neda Arab 1:18:13
I just want to make a quick note that I know there was a lot of different links shared today during the chat and I have added all the links into the app. And I will be doing this along with industry panel as well. So if you miss in the chat, don't worry about it. Just log into the app and then you'll have all the links over there.

Dr. Brian Dozer 1:18:33
It looks like we have Rupa and her dog.

Aurea Lawson 1:18:37
So I know that we're five minutes ahead, no worries. We are going to take a quick 10 minute break. We do not have to log off you can mute and turn off your camera if you would like to step away from your

computer. If not feel free to turn on your camera and network as you please. The chat is available for you to network as well. We will come back at 10:30 for the industry panel.

Dr. Brian Dozer 1:19:08
Wonderful

Aurea Lawson 1:23:13
Neda, I think this is the most my email has ever received my will short three years why? I've officially hit 321.

Dr. Brian Dozer 1:23:27
Today?

Aurea Lawson 1:23:28
Yes.

Dr. Brian Dozer 1:23:30
From what? Oh from student leadership series. Yeah,

Aurea Lawson 1:23:34
I'm saving their admissions as they come into their teacher folder.

Dr. Brian Dozer 1:23:39
Gotcha, gotcha. Well that's good. Yeah.

Aurea Lawson 1:23:45
I just I'm trying to catch up there and I was like I'm so proud. I have to catch up because there is a submit quickly.

Charlotte Augustein 1:23:56
Thank you guys for allowing me to participate.

Aurea Lawson 1:23:59
Oh yes. Thank you for joining us. We're happy to Yeah. I feel like we'll meet you again in January. We have the DMA advisory board.

Charlotte Augustein 1:24:09
Yes, absolutely.

Dr. Brian Dozer 1:24:11
Yeah. Now we really appreciate it.

Charlotte Augustein 1:24:14

Yeah, it was. It was fun. There's some great things happening with our community colleges. Yeah, I'm really happy to be part of it.

Aurea Lawson 1:24:25
Yeah, definitely. Um, I did want to ask a teacher emailed me separately, and they were just asking if students are from your point of view, I guess the students are doing fine. Working online, and I guess they mean like by like successfully studying online.

Charlotte Augustein 1:24:48
Well, I can say that. We saw a big decline in our students attending summer camps or K through 12 specifically because their hours are off. They get up late, they go to go to bed late. And so there's, there's just, there's just a disconnect there. But for the community colleges, I have to say, um, even our K through 12 that are doing dual enrollment, they're doing really well. And I mean, I know there's always those that have challenges, I think the biggest thing is, because it's a very eclectic area in LA, we have those that are challenged with having to support their families, financially, because the parents may have lost a job or watching their siblings. But they, because we're in that virtual world, they have that flexibility to get there to watch the class that they might have had to miss at different hours, and they're making it work. So yeah, I'm there's challenges by far. But for the most part, I think they're doing really well. Any enrollment is up. immensely. Nice. Yeah, that's everybody, you know, they want to, you need to keep your skill set up, especially in it, if you're, you know, if you're going to be successful, because things change. Okay.

Dr. Brian Dozer 1:26:16
Yeah. Charlotte, have you heard any, anything about how ICT compares to other sectors, in terms of enrollments? Because, you know, we've heard from some colleges that enrollments are down, but if ICT is up, you know, where, where are the declines?

Charlotte Augustein 1:26:34
So when let's do retail and hospitality? tragically hit?

Dr. Brian Dozer 1:26:39
Yeah,

Charlotte Augustein 1:26:40
we're seeing as they're pivoting into health care, or it. So they're going for those certifications, and or more sustainable career driven paths. Because, you know, we just don't know how long the impact is going to, you know, still be hurting our restaurants and our, you know, hotels and such an event. So, yeah, I think event planners, it would be great if they wanted to project management, they already know it, they just need to learn the applications and the software and the foundational skills, and they're good to go. So, you know, I get a lot of students when I do my Saturday, webinars, I get a lot of students that are older, they have, they also have, you know, they have experience. And so they're pivoting and I help them one on one, with things that they can do to increase their opportunities, as they're looking to pivot into a new a new sector. And I always say, you know, you can be in it, but not be a programmer,

and you can be in it, but work in healthcare. Right. So my sector crosses over every sector. Yeah. And just, and then now thinking of it, you don't have to just look within a 10 mile radius to find a job. These jobs are everywhere. So the world is your oyster, go go and put your resume out there and see who you know, who is looking and who will be willing, I have some that their employers are in Germany, and they work here. So it just, it just depends. And so just I always say just don't limit your opportunity. expand on it and see what happens.

Dr. Brian Dozer 1:28:27
Yeah, yeah, it's it's, you know, it's interesting, retail, culinary hospitality, you know, we're setting up panels for testing next week. And that was the one we had the most trouble with, because all of our contacts are not in their jobs anymore. Right. You know, because of how of just how decimated the sector has been I mean, I can tell you, we, I posted in August, I believe, a position for a fundraising and Development Coordinator part time, and I bet you 95% of the applicants came from retail hospitality.

Charlotte Augustein 1:29:01
Yeah, I bet. I bet. Did you fill that role?

Dr. Brian Dozer 1:29:04
We did that. Yeah. Well, you know, Misha, right. Misha Hauser. Yeah. Nice. We Misha joined us. So.

Charlotte Augustein 1:29:12
Yes. Very nice. Yeah.

Dr. Brian Dozer 1:29:18
Do you know Mike Gentile from CISO SHARE.

Charlotte Augustein 1:29:22
I don't think so. Oh,

Dr. Brian Dozer 1:29:23
well, allow me to introduce you.

Mike Gentile 1:29:26
Nice to meet you.

Charlotte Augustein 1:29:27
Hi. How's it going?

Mike Gentile 1:29:29
Good Yeah, I was I went to go connect with you on LinkedIn. And we're already connected. So yeah, it's one of those crazy worlds where like, you connect and I was like, ah, but I don't know if I've ever actually met her either. Yeah, we should

Charlotte Augustein 1:29:45
have a follow up conversation. And we obviously are in the same circle. Yeah, yeah. Yeah, I am. I'm almost at my 30,000 limit. So once you hit 30, in LinkedIn, you can no longer Connect individually, they have to become followers.

Dr. Brian Dozer 1:30:05
So that's a lofty goal.

Charlotte Augustein 1:30:10
It started out as a challenge. When I worked for Microsoft a couple years ago, the manager had said, somebody has to take on LinkedIn, you know, and I said, I'll do it. And I am not a social media person at all. I'm very private. And what I found is, I love it. I love it. I love the connections. And it's great for my role. Because if I need industry, folks, I could just do a quick post and I could fill it. And it's, it's, you know, it's so interesting to see what's happening out out there. It's, I always tell the students you need, you need your LinkedIn profile. It's 16 years old. I don't care what's on it, we can build it out with digital badges, but you need to start having a professional presence. Yeah.

Dr. Brian Dozer 1:31:01
I, my daughter is 18 or 19. Now, but I made her do it at 17 and said, you know what this is going she's like, why would I do this? And I said, you want to do it now. Right? And you want to start building those connections. And then a couple weeks ago, she was looking through some stuff and saw an internship at ACLU. And I said, You know what, you need to go in and update your, your LinkedIn, right? You need to follow ACL and on LinkedIn, or ACLU on LinkedIn, right? You need to, you know, build your build your base, and so she's starting to see the wisdom of it.

Charlotte Augustein 1:31:36
So that's good. That's good. It's, um, it was challenging for me to with with my kids. My daughter, who is now a senior in college, I made her do it years ago when it wasn't cool. And she has seen the benefits from it. And now, she, she's a LinkedIn Ambassador at her college.

Dr. Brian Dozer 1:31:57
So Oh, that's awesome.

Charlotte Augustein 1:31:59
Yeah. So there's a lot of great opportunities. And I always say it doesn't matter. 16 or 60, you should have a presence on that platform..

Dr. Brian Dozer 1:32:08
So are we ready?

Aurea Lawson 1:32:11

I think we are we have our QA analyst here with us. And I know Mr. Anderson is on his way. Yep. So if the participants can hear us, and we are beginning our industry panel now with our industry professionals here, and I will turn it over to Mr. Anderson.

Brian Anderson - Telecomprehensive Solutions 1:32:32
Well, thank you Aurea, I would like to welcome my fellow panelists, Rachel Valentine. It's good to see you. And Manish Bharti, it's good to see you, Mike Gentile, it is nice to make your acquaintance for the first time here today, Charlotte, if you wouldn't mind, deactivating your camera so we can highlight the panelists for this. Thank you. We're going to just take a moment and just go through self introductions. So starting with Rachel, if you can just introduce yourself, your title and the company that you work with and what your company does, so that our audience an idea of who it is that we have on the panel.

Rachel Valentine 1:33:04
Yeah, so Hi, everyone. My name is Rachel Valentine. I am the head of people at Vincent. Vincent is an Irvine based software consulting firm. So we are an agency predominantly doing web and mobile projects. So we do some embedded development as well. My background within the tech industry. I've been a part of the tech industry for the last eight years holding different roles from marketing to sales, and then eventually transitioned into technical recruitment. And now, specifically at Vincent, I oversee our recruitment and hiring, as well as our HR and everything employee related.

Brian Anderson - Telecomprehensive Solutions 1:33:49
And can you also talk just a little bit about the work that you did with COVID in Orange County?

Rachel Valentine 1:33:54
Yeah. So coated in OSI is a nonprofit organization that we organized at the tail end of 2018. And really, the initiative there was to bring together the group of OSI based tech companies and have them coordinate and collaborate much more effectively so that we were able to or so that the intention is that we highlight the growing tech industry that we have here. So that technical talent stays from our local universities and community colleges, as well as attracts technical talent from other geographical areas, really, with the intention to of keeping talent here and really seeing our businesses grow here locally.

Brian Anderson - Telecomprehensive Solutions 1:34:38
Great, such wonderful work that you're doing. Thank you. And, Mike, let's go ahead and have you introduce yourself and your organization and what you guys do?

Mike Gentile 1:34:46
Sure. So I'm Mike Gentile, founder, President and CEO of CISO SHARE. We're a cybersecurity provider here, headquartered in San Clemente. What's unique about us is our approach is based on learning and teaching in everything we do. So we bring on people that are that that have aptitudes to really learn quickly and teach quickly. That's translated into metrics where 70% of the people that begin and work here at seesaw share, it's their first cybersecurity job when they start, which is very unique in our industry. That approach has really caused us to grow, we were the second fastest growing security company on the Inc 5000 in 2019, and the seventh fastest this year, just released in 2000. And then,

about a year and a half ago, we started a program called cyber forward, which builds on this learning and teaching program in terms of trying to transition people that have those same learning and teaching aptitudes into working careers in cybersecurity, as well as helping our communities and helping people to get above livable wage. This is a big problem many, many folks are suffering against right now.

Brian Anderson - Telecomprehensive Solutions 1:36:02
Oh, absolutely. And Mike, would you mind just saying as far as people coming into the industry, and this being their first cybersecurity job, then what are those criteria that you're looking at when you're looking to hire somebody in and provide them with this opportunity?

Mike Gentile 1:36:16
Yeah, so I mean, I think it's, again, really around those those learning aptitudes and then how well they can teach once they learn. So from a learning perspective, it's it's how you listen, how you can actually ask informed questions, those are big things that we're always looking for on the teaching side, then it's also really, you know, how do you communicate both your ideas as well as communicate in a way in which it takes into consideration the person that you're delivering information to? I mean, the thing about cybersecurity, and really, when we started this learning and teaching approach is that your definition of it is different than mine than everyone that's on this call. And so we've really found that if you can get people that can kind of understand and get people connected with a bridge about how to have conversations about it. They're really successful. And that translates all backgrounds and disciplines. So we are not, believe it or not, we're building a lot of high school programming right now. And we're not always saying, hey, it needs to be that stem pathway. We're bringing in artists that can present information in very effective ways. Or people that can just communicate in ways that are really successful. People that work at at restaurants are really good at understanding what someone wants and then giving them information back to them so they can make decisions. So really, it's it is the the gamut of background that makes for a successful, but it generally always ties back to those two elements of a learning capability and a teaching capability.

Brian Anderson - Telecomprehensive Solutions 1:37:52
Sure. And those soft skills are just so intrinsically important in everything that we do in the world of it and information systems. So thanks for joining us today. Manish Bhardia, would you take a moment and introduce yourself?

Manish Bhardia 1:38:06
Yes, thank you. Thanks for having me. At the panel, morning, everybody. So as a as a company, we are focused thinker is focused on being partners for thought leaders. And we DO IT consulting, mostly software development in the area of cloud data, AI. So traditionally, we have been doing programming in the desktop or enterprise world with the rise of cloud and rise of the data analytics or artificial intelligence, we pivoted towards more focusing towards modern technologies, which is taking the old application bringing to the cloud or applying data analytics or artificial intelligence to the existing application. So that's our focus. My name is Manish Bhatia. I'm president at think AI. Me and my partner, we are mostly serving mid sized to large customer, our largest customer is Starwood and we support them 24 by seven, but small customer could be a five people company also.

Brian Anderson - Telecomprehensive Solutions 1:39:19
So for those who aren't already familiar with Starwood as an organization, who are they?

Manish Bhardia 1:39:23
Yeah, I mean, Starwood is the company name, which holds properties like Marriott or Sheraton. So that's the company we work on, like 10,000 people company, so that's why I wanted to highlight that we work with bigger companies as well as smaller companies.

Brian Anderson - Telecomprehensive Solutions 1:39:41
And Manish Can you also explain your role as far as Microsoft and the Microsoft channel partners network?

Manish Bhardia 1:39:50
Yes. So interestingly, 2012, eight years back, I was just coming off a project management role or as As a development role, and was venturing into the business world, and I was still a developer, or a programmer, I was not a salesperson or marketing person. And I was trying to see how people do business. And so I came across this group called iamcp, which is stands for International Association of Microsoft channel partners. When I went there, I learned about technology, but also saw how you can build relationship in a group, build trust, and get referrals from the group. And I started getting business through referral. And so I stuck with the chapter. And now, I'm the president at iamcp. SoCal, and that organization pretty much is focused with Microsoft channel partners, but not of learning. Like we were talking about softer skill learning, sales, marketing learning within the community. And I have grown from being a developer or programmer to really account manager or let's call it salesperson. So it has been very beneficial for me to be part of one of the organization and get help from the experience people who are already part of the association.

Brian Anderson - Telecomprehensive Solutions 1:41:21
Fantastic. And just to introduce myself, for those who may be new to the call. My name is Brian Anderson, I am the founder of Telecomprehensive Solutions. We are a strategic technology and telecommunications, consulting and brokerage service firm, which really means that we assist with private and public organizations in executing digital transformation strategies, bringing in new technologies to expand the operating capabilities of companies drive down operating costs and margins. We provide fractional CIO services Chief Information Officer chief technology officer to identify programs to drive revenues. Revenue alignment, as far as technology spend, goes, reducing that spend, or maximizing the return on investment, as well as looking for new areas to introduce revenue streams to an organization that they may not have capitalized on previously and developing those technologies that will implement those. My personal history I chair the business and Workforce Development Committee for the Irvine Chamber of Commerce. I am a panel advisor with the executive next practices Institute, which operates out of the cove at UCI. And we have been working for the last five years very specifically to increase the level of support for technology startups, specifically in Orange County, providing pathways and resources for companies to get off the ground and extend their runway and become employers of choice here in Orange County. So we'd like to welcome all of our

panelists, and we would like to welcome our viewers, we're going to dive in a little bit here and kind of get into the meat of some of those opportunities for students. And you know what those look like at this point. So let's go ahead and start with Rachel, are there any internship opportunities for high school students? And how important are internships for future employment specifically in this space? Yeah, so

Rachel Valentine 1:43:19
we, we've done tours and a bit of shadowing for high school students, we haven't ever had a high school student be an intern, though, the way in which Vincit operates is we don't often say no to a lot of things, it's just more of at that particular time being able to make certain accommodations. With everything remote, I'd say probably is a little bit more tricky to give the support and help to a high school student at this time. However, we are always trying to look for opportunities to parents support the younger generation. internships in general are hugely important for us, I would say, oftentimes, looking at junior developer resumes, coming from UCI, or those that hold as the curriculum that they're taught and focused on within school being heavy with Java. And Python isn't always as suitable for the web development projects that we have. And we see that when students have internships that are a bit more focused with web development technologies, they're just a stronger fit for our needs and adapt much faster. So know if that was a bit of a wordy answer. But yes, internships are always highly valuable. I think, you know, Mike and Manish also spoke about soft skills. I think just getting some of that professional setting experience and learning how to interact and work on teams with individuals of varying ages and varying levels of experience is also just extremely useful.

Brian Anderson - Telecomprehensive Solutions 1:44:55
Absolutely. Diversity and Inclusion is such an important factor in the sector specifically. And I know that there are a number of initiatives to increase that diversity and awareness and inclusion of, you know, gender capabilities and bringing more women into it. There's a number of organizations around that as well. Mike, what internship opportunities? Might you guys haven't see? So Sherry, how do you support those who make those available to a high school demographic?

Mike Gentile 1:45:22
Yeah, so I just in general, we, I'm not a proponent of either internships, or apprenticeships, which is really why we came back, and are really working on building high school curriculum. And the reason and the reason for that is because really, in an apprenticeship or an internship, there's the belief or not really the belief, there's really the approach that the person that's actually taking the apprenticeship or an internship, they're getting all the value out of the relationship, whereas the hiring organization that's using those people aren't. And right now, at least as it relates to in cybersecurity, we're in the middle of a war. So you're getting people that are completely, utterly stressed out, and they don't have time to actually work with people. So we really have used the we use the concept and all of our programs have a value ship in any of our and anything that we do. There needs to be as much value for the for the person that is actually in the in the we call them talent participants here, students but talented the talent participant as the organization. And we think that always needs to be in balance. So how do you get there? Well, you get there by teaching junior level capabilities, that people can actually do that add value in business situation. So that is the core of our program. Further, in our research, we found that generally, you have very senior highly paid Rock star people in cybersecurity, you spend 80% of their

time doing junior level tasks. So we do analysis in terms of organizing those items in the organization so that we can then open up junior level roles in the common security program. So then it comes down to can you actually put high school level students into those junior level positions? We believe Absolutely. And that's why we've just been working on college curriculum with Kelsey Fullerton as well as we were now working on building high school level curriculum that we're looking to roll out hopefully next year. The key though, is that you're working and you're not coming and hanging out. It's people that have to be in the right skill set, and in the right position in their life, that they're ready for that level of maturity. And we believe that generally, at least junior level, but generally senior level folks, especially those that are impacted in family situations, or stuff, where they really need to work to help their family, those are the people that we're really targeting, as this might be a program to help us, help us in the battle. Okay, great.

Brian Anderson - Telecomprehensive Solutions 1:48:13
Thank you. And Mitch, do you have any internship opportunities? Or have you worked with internships? And at what level does that lead down to high school at all?

Manish Bhardia 1:48:24
Yes, I don't think high school but college level internship we have had and my company is me and my partner. And my partner is very technical, and he has the mind for teaching or grooming the talent. And that's where he is always bringing the interns to, to mentor them. And so, as Mike said, these interns are not just there for doing some small project, they are actually working on the project and learning and delivering help. So it's a really good way of getting to know the working atmosphere than just hurry like Rachel said that you know, there is a gap between what is being taught than the what is getting used in the actual projects. So we we are a small company, but we already have two interns working on the projects and our thinking is as we grow we will have more opportunities right now, we already have two interns and they are working on very high end project in the sense we are comparing attend to our lives experience but these interns are on college level and they have some good, good technical skills because they are learning all the new things. And so it's kind of matching also because the technology has moved fast. Kids are moving fast with that, but we are able to utilize their best of technical skills in the actual business situation. Sure.

Brian Anderson - Telecomprehensive Solutions 1:50:04
And for the purpose of clarity and specificity, what specific technologies are those interns actually working with? in your organization? What backgrounds do they need? What skill set is that, that they're leveraging? Currently,

Manish Bhardia 1:50:21
they were taught, but both of them are right now helping on the data analytics projects. So looking using couple of tools like Power BI, and which was not taught to them before by their school or their curriculum. But Dave, my partner was able to tell them, okay, this is the data and this is how we are using. So these are your roles to do and fortunately, they are very quick to pack so. So coming back to the basics of what they need to know, I think the basic of programming, understanding or the computer understanding is good. But then mastering one of the programming language like Python, or basic

databases, skill is kind of good situation where you can start to help and not just be there that I need help kind of scenario.

Brian Anderson - Telecomprehensive Solutions 1:51:17
Sure. Well, and you mentioned mastering skills. And so this becomes an interesting question for Mike, especially given your operating philosophy with those demonstrated skills, certifications, what certifications would help students get job in the industry, specifically in the cybersecurity role, that would be helpful for them to have when entering into this workforce?

Mike Gentile 1:51:44
Oh, boy. So similar to and we have, I want to say two, we have an internship phase and our cyber forward program, we call it more of that just because that's what everyone is, you know us. So I don't want to give that impression, and we build them up. But philosophically, you're probably in the minority on that. Same thing with certifications. We don't believe I am not a proponent in in any certification system that I've seen in cybersecurity yet. You know, as well as statistically, the folks that are coming into our cyber force program. We have people that have master's degrees in cybersecurity that come into our program, because they can't actually get real work. You know, and we're focused on transitioning people quickly. So I don't think that there's any cyber certificate programs yet that that prepare people for, for really being successful in cyber cybersecurity, at this at this time, especially in the in the learning phases.

Brian Anderson - Telecomprehensive Solutions 1:52:53
And let me ask you the follow up to that. Why is that specifically that the certifications that are currently out there are not a sync to what's happening at what we call in the wild. Here, what why is there a disconnect between those certification paths and what's actually happening with the work on a day to day basis? Sure. So

Mike Gentile 1:53:12
it's because they're generally focusing on domain knowledge. So the example that we always get is like, you know, any other programs that are out there from a certificate perspective, they'll teach like the domain of, or they'll teach the understanding of racecar driving, for example, whereas the approach that we take is we bring in people at a junior level, and we teach them how to do three specific junior level jobs and the tasks associated with them. So for example, changing the tire in the race, washing the window, and maybe filling the gas. And we just focus on how do you do those skills with proficiency that generally people can learn, they often don't even understand all the dynamics of everything going on, but they can do those tasks, and start adding value quickly. So that allows them to start working and puts them in the race. So then they can move and some other people have talked about, hey, there's a lot of demand in it. But you need to know somebody will the best way to get to know somebody and to get them to want to work with you to start adding value and taking work off their plate. So we try to get them into that. So all of the certification frameworks break down in in really two ways. One, either they just teach this domain knowledge which tries to teach you everything at a high level, but not how to do anything. You alternative to that it happens in security a lot is that they just focus in a very specific area. So for example, like Cisco, you know, Cisco teaches you how to operate in the Cisco way of doing

things right and you can do that, but it doesn't teach you out the outside world and in any organization. You always need to know how it connects with everything else in order to use anything So that's the other place where it breaks down. And then on top of that everyone in their brother right now our sister is offering free training, come take come to our university do this, do that. And we partner with many of those schools, but not just schools, professional organizations, or cybersecurity companies. But the problem is that is that a student or someone really, they don't know how to piece all of those different things together. So even if they get that Cisco certification, and Cisco stuff's amazing, too, by the way, I don't. And their training curriculum is unbelievable, I don't want to take anything away from it. But it doesn't teach you actually how to apply that in a way that it's going to be applicable to working really, really early on. And so that's where they really break down. So where we've spent our focus is on organizing all the different ways in which they connect together early as well as those junior level tasks. But that's not dependent on certs.

Brian Anderson - Telecomprehensive Solutions 1:55:56
No. And that's wonderful. Just to again, be very specific. And let's move out of the metaphor realm from the racecar and into the it realm, when you're training somebody to do three entry level jobs, what types of skill sets or tasks would they be working with? In that preparation? Would it be monitoring, you know, access logs? Is that going to be you know, intrusion detection and response? What do those three components look like?

Mike Gentile 1:56:23
Great. So we teach specifically on three job roles. The first is a third part, what we call a third party analyst, that's someone that performs risk assessments on an organization, that's a supplier for you. The other one is what we call a policy analyst. And a policy analyst is someone that does a lot of the documentation associated with security policy standards or guidelines in an organization. And then the third area is what we call a vulnerability engineer. So if vulnerability engineer is more on that technical side, and that's associated with looking to remediate or identify and do research on vulnerabilities, often technical in an in an environment. So on the on the I'm on the third party analyst and the policy analyst, see, where we're a little different is, is that we choose those roles, because the majority of people that they interact with in those roles often don't understand security themselves. And so it's easier for them to be successful within teaching them how to do junior level tasks, when they're not working with people that are often experts. In fact, they're going to be able to better align to be more successful in communicating with the people that they are because those other people also don't understand security. So we're a little cuckoo for Cocoa Puffs with how we do everything here at sea. So sheer, but we do it so that we can put them in start making them work. So what skills do they need? Well, they need to be experts in not knowing what the heck security is, because that's who they're going to be working with. And that's why they end up being really good in those positions. On the on the vulnerability side, I want is, is in what we call a technical architecture, we break down security, we break down security in two ways. There's about 40 roles in cybersecurity and the common security program. So in the common organization, they can all be broken down into what we call role performance architectures like crazy word that we use here. But it breaks down into two types of roles. Either it is a analysts, or analytical thinking type of skill architecture, or it's a technical skill, architecture and cyber. So the vulnerability one is in that type of architecture, the only type of technology

background that we teach, as you move through the phases a little bit is associated with vulnerability software, you know, like a qualis, or something like that. But we only dip our toes in, in that to kind of show them how one technology interacts with everything else. Everything we do early on is about connecting the dots for someone so that they can actually navigate in different directions. So it's a very, very different approach than trying to teach them how to do senior level capabilities early on. Just we found it's easier to kind of get them going. And then they start once they understand connecting the dots, and they're adding value so that they can get paid, then it causes an acceleration with them learning the, what we call more classical learning methods around these things. Absolutely. Maybe better by the way, too. We're you know, we are very new with how we approach things. Our question that we always ask everybody is in one of our training elements is did we add value for you in this was it worth your time here, and we measure that very, very heavily, but we are very, very different with everything that we do. And we're learning greatly, but we would say that the metrics associated with what we're doing seem to be doing quite well amongst other metrics in similar in other development programs in cyber.

Brian Anderson - Telecomprehensive Solutions 2:00:12
Gotcha, great. And Rachel, as far as Vincent is concerned, there's a plethora of different roles and responsibilities within the organization. And I think being the head of people is a puts you in a very unique place to kind of talk about this. So what certifications would help students get jobs with Vincent? And in the software development industry, specifically? And how, how much value does Vincit as an organization place on those certifications during the hiring process? Yeah,

Rachel Valentine 2:00:46
so I would say, you know, definitely when we are looking at candidates resumes at whatever level, we never require any specific certifications, but obviously, they're always going to come as a bonus. More often than not, when we're doing internal recommendations or helping with team members in in getting new certifications, or kind of those that I think have seen, greater preference have definitely been around cloud technology. So either getting like an AWS certification or a Google Cloud certification. Additionally, we've seen great benefit, you know, being that we are an agency or hopefully within any company, you know, the the the project lifecycle process for individuals that are hoping to take on more leadership capability, you know, doing Scrum certifications even have been greatly beneficial just to have that as, you know, extra, an extra tool in their toolkit. So I'd say those are kind of the typical ones that our team has either gone after or that we have taken most notice on for specific when we're evaluating resumes, but again, we always see it as a big plus. But you know, we wouldn't, we wouldn't discredit someone if they didn't have certain certifications.

Brian Anderson - Telecomprehensive Solutions 2:02:14
So for those that aren't discredited for not having the certificate, what are those unique factors that you look for in that individual that breeds confidence that they're going to succeed in the role and that it's worth investing the time to help provide that on the job training for them? Yeah, so

Rachel Valentine 2:02:30

again, coming back to the fact that we do a lot of projects, web based projects or mobile projects really looking at, you know, again, and if we're talking about students, we are very cognizant that they're coming in with minimal or no experience or professional experience. But looking at where they've taken initiative to work on personal projects, utilizing web or mobile technologies, we do a lot with JavaScript. So if a candidate has, you know, JavaScript, or react or node or graph qL, those kind of buzzwords on a resume definitely stand out to us. Even more significant, again, talking more about students, since that's kind of a greater focus of the conversation is having students that have Git hubs that they're uploading repos to showing that, you know, if they haven't had any professional experience, or not even any internships, that they've taken initiative to get some of that hands on experience of their own, because for us, it's much more of you know, there's so much that you learn in a book in school tends to be a lot more about theory. But as everyone, no matter what degree you study, or what profession you go into, really the application and the experiences is where you place the greatest value. So, again, yes, seeing if a candidate didn't have specific certifications, highlighting projects where they've actually utilized, you know, web or mobile technologies that we work with, or having those public GitHub accounts where we can actually check out some code or C that they took initiative upon themselves to, you know, kind of build out personal projects.

Brian Anderson - Telecomprehensive Solutions 2:04:18
Sure. And this ties into a question that we do have from Steven Gilbert here is asking specifically, do you mainly recruit for your computer science graduates? And are you recruiting primarily for front end or back end developers?

Rachel Valentine 2:04:35
So we, you know, we kind of, I would say most of our team we classify as full stack developers, though everyone typically has a preference of or, you know, maybe a stronger aptitude of working back end versus friend, but we typically when we open jobs, we don't only really highlight for someone that's, you know, like a front end opening. Again, this just is the nature of of our business, since we're an agency projects are always evolving. And with our team, there could be one project that they're working on where, you know, 70% of their time is front end development. But the next project that they work on is maybe a little bit more balanced 5050. So we, we try to look for individuals that are comfortable or at least willing to take on a full stack capability, though, we again are cognizant that people will have their preferences and try to play to their strengths. With regards to the note of mainly working with CS graduates, I will admit, in the past, you know, I've mainly done recruiting like at the UCI campus, I haven't necessarily gone to community colleges and participated in recruiting efforts there. But it's not something that we're opposed to, again, I think, especially if it's an applicant that's coming to us, with an A or, you know, nowadays, there's a lot of boot camps that students go through, we actually have, I think, four to five applicants that are not applicants, current employees, that went through, you know, the six week or six month, kind of coding boot camps to get their skills fast. So, you know, it doesn't need to be just CEUs graduate, apologies for my dog. Um, it kind of comes down to looking at what is it that they've been exposed to just doing? Sorry, my friend, she is looking for a walk, I'm looking at what they've been exposed to in whatever curriculum that they participated in, whether it be a boot camp and a program, that ideally again, pulling it back to web and mobile web based technologies, that there are also if we are having a conversation, some of the soft skills of showing that initiative that had willing to

put in the work, because I might not have as much to show on kind of an education of a four year degree, but that, that they're kind of willing to do some self education as well. So I think I kind of went in a little bit of a circle. But to summarize, in the past, I've done more initiatives on four year university campuses, but we've hired people with varied backgrounds, even those coming out of boot camp programs. So we're not opposed to it, it comes down more to what they can highlight on their resume as to the technologies they've used and how they've applied them. And if we have the conversation, looking at the potential based on personality attributes of that willingness to learn and kind of adapt quickly to a surrounding.

Brian Anderson - Telecomprehensive Solutions 2:07:38
Sure. Okay, great. So I kind of want to transition. And Rachel, I'm going to pick on you again, this is going to, this is going to tie in a little bit. For cloud certifications, specifically, obviously, front end, you're focusing more on the user interface, that that graphical element on the back end, for that type of development, how important is cloud certification and the design at the application layer to be able to queue up containers in AWS and lock down that infrastructure and have that security mindset? Are there any cloud certifications that you do look for or prefer in the hiring process? You know,

Rachel Valentine 2:08:20
and, and again, I think, and sort of what, you know, Mike was discussing. Sorry, my dog is, of course, you know, now transitioning to the world of going virtual. Basically, you know, we kind of have the expectation that a lot of, you know, recent grads coming to us, we are going to do a lot of support in educating them. So, um, you know, I think a lot of it comes with on the job experience, if they've been fortunate enough to get experience and other internships or have completed certain cloud certifications. Obviously, AWS is just, you know, a platform that gets integrated into a lot of projects. Google Cloud is growing in or is also very popular. So those certifications, we we do place value on them, of course, but I would say that we kind of go with the expectation that a lot of these individuals are just going to need to learn from, you know, the actual on the job experience. Sure.

Brian Anderson - Telecomprehensive Solutions 2:09:25
Okay. Great. And passing it back to Mike as well. How important is that cloud? experience and certification? You know, from a security standpoint, specifically, when you're dealing more with the architecture side of things? Do you provide an or do you give any kind of reference whatsoever to any certifications or what environments are your engineering stack employees actually working and operating within?

Mike Gentile 2:09:54
Yeah, so I think naturally the cloud is is huge is a huge part of You know where everyone's kind of going to, I think the big thing is that we want people to take a lot of the programming that's out there a lot of the learning that you have like with AWS, you can learn all about AWS and how it works as well as Azure. And I think sometimes people what as it relates to the cloud, what we found is that it's like shopping at Costco or shopping at Ralph's. Like, when you go into Costco, you have to understand where, where everything is and how it works. And the hardest part about operating in really, in a certain cloud environment is that they all work very, very differently. And this specifically is big in in security. So

for example, in AWS, you can order any type of specific security provision by line item, but you have to know what to order. And you also have to know that if you don't order it, you're not secured for it. And that's why how most of the breaches happen. So rather than specific security's security cert or cert specific to the guy, what we want to do is make sure that they have gone through a lot of that training and that they understand it. And we ask them specific questions about whether they have those aptitudes, same thing in Azure. And then specifically as it relates to security, the other thing that we really want them to understand is why organizations go to the cloud, and how hybrid environments work. So for example, you know, they have a legacy environment going and then they move to the cloud, and they have some of their environment in the cloud. And how does security happen between those different elements and who's on first when it comes to that. So it's more than understanding of those items and being able to talk about them intelligently, than it is any specific certification. And that particular competency, at least in my experience, people either get it, or they don't, though, you can know after one conversation, and I can tell you in an interview, or if someone's coming onto our team, they're going to ask, they're going to ask those questions, who's going to tell them about Mach three, whether the candidate understands, there's going to be able to talk through some of those complexities associated with it. So I think that's a better litmus test than any specific cert that they make.

Brian Anderson - Telecomprehensive Solutions 2:12:30
Absolutely. And I think you bring up a really great point, you know, for a lot of the students that may be listening to this just to set some standards and definitions around some of this hybrid infrastructure, specifically referring to a combination of on premise hardware that's being maintained, as well as cloud hardware, sitting in a data center somewhere off site, and accessing those things remotely, which would be you know, your VM engines, virtual machines, containers, a lot of the breaches that we've seen historically have been because s3 buckets weren't locked down on AWS, and permissions, you know, were left open, and data was able to get raided that way. So that definitely important and I think this then ties in really well for Manish. With think AI and the products that you've rolled out, you're more in the Azure Stack than AWS primarily, is that correct?

Manish Bhardia 2:13:24
Yes. For the enterprise companies, or the organization, we have been mostly working with the Azure, but a lot of startup and mobile application has been on AWS. So it's kind of mixed. But yes, 75% of our projects are on Azure.

Brian Anderson - Telecomprehensive Solutions 2:13:46
Absolutely. And are there any certifications that you look for? As you continue to look at expanding your team?

Manish Bhardia 2:13:54
certification is not a must. Understanding is a must kind of scenario. Anybody who's starting having a basic cloud? Course done, or cloud certification is helpful, because first of all, the things are changing so fast, having a wider knowledge of wider understanding about the things are much better than just going one one way. So as we are coming into the cloud environment, it's many different services you are using. So knowing like Mike said, right, every Azure every cloud is different, you need to know

multiple things. So, getting a base clear on what is out there, helps you a big way. You have not been focusing specifically just on certification, because we are a very small company still, but understanding is important. So walking through the through the understanding of candidate is what we look for, and we are able to identify Okay, these are the gaps and then bring them up to speed on those areas. So that They understand the implication of their thinking, or their applications when working with others.

Brian Anderson - Telecomprehensive Solutions 2:15:06
Yeah, absolutely. And I think if I can sum up just kind of some of the feedback here, I think across the board, it's not so much the ability or the demonstration of certifications, per se, as much as the ability to demonstrate the capability to learn quickly and apply quickly, that information is really critical in this area. And I would say that, my personal experience, I mean, I started with computers, when you know, I'm a child of the 80s. And I remember coding in Dawson, basic when I was seven years old. And the landscape has changed so dramatically over the last 30 years. You know, you have to relearn this entire industry every two to four years. What was true two to four years ago is not necessarily true, although some of those fundamentals of those principles are persistent and maintain over time. And having that long understanding and the ability to re educate and adjust and apply and reinvent yourself on a consistent basis is so critical for success in this industry. Let me do ask you though, Are there additional students or additional steps that students with associate degrees that don't quite have that four year experience can take to find entry level careers in this field? And what would your recommendations be for the for those students that are not yet at that four year? level?

Manish Bhardia 2:16:33
I can start, right. So I think Rachel did mention about Scrum thing, project management skill, ties more into the softer skill thing. Softer skill is a big portion, which we don't focus when we are talking specifics on the like, degrees, or a kind of certification, softer skill is kind of left on the side, but it's so important. Many of the projects are failing, or getting delayed because somebody did not pay attention. So you know, kind of lightweight, project management skill, which is kind of like Scrum, I would say is very helpful. Similarly, business analysis is another factor, which is kind of ties into the product ownership or kind of a product development focus. But it's helpful in all meetings, somebody's talking business, not just thinking technology, because we have like siloed into one side of thinking by how we know, the solution should be, and we don't hear the actual situation. So I would say, if we are talking specifically about somebody who doesn't have four year degree and trying to add more skills, these are the very strongest skills and the students should highlight, or should pay a major attention on highlighting those skills when talking to prospective employers. And we have had situations where the team is very smart, but nobody was paying attention on the softer skill. And project is derailing. Because of that, if a junior or a person who is having less technical skills can gel everybody together or support on business analysis or project management, I think that's a break in great add on. And this is the speaker student has to bring and even the our education system has to put that you know, you're good good things are the good learnings wherever you had, apart from technologic can be a big, big benefit for the employers.

Brian Anderson - Telecomprehensive Solutions 2:18:53

Sure. And Mike, will have you weigh in on this one as well. What are those additional steps that somebody who may or may not be at that four year level, maybe a two year degree can do to get those entry level career opportunities in the industry?

Mike Gentile 2:19:11

Sure. So I mean, we, we partner with with many of the schools that are on this line, while folks are going into the two year in our in our cyber Ford program. We have lots of folks that are in two year, two year programs that then come and take our cyber forward program so that's the best way I think the other thing that we've tried to do I know on all the questions being asked, you know what certifications or do you deal with? Oh, none. You know, what experience you have to have? Oh, Mike none. We do that on purpose. Because we want you to come in and check it out and kind of get in the game. The biggest thing in our experience that keeps people from entering cybersecurity or coming in is that they don't think They can do it, they're afraid. They're afraid to do it. And so, you know, I said at the beginning that 70% of the people that work here at Caesar's yours are for cyber job, and we're doing work in all the biggest companies out there, and everything in between. So you just have to have that level of confidence that you can do it. I think in our program on the inner on the, on the front end of cyber Ford, we spend as much time educating people that they can do it and what cybersecurity really is, and that it's a people discipline, as much as really just what is the mechanics of the program. The final thing that I would add to is that we're huge proponents of partnering with two year training programs, and academies like Cisco Academy and all the different academies that are out there as well as for your programs. It's not that we think it's, it's our way of doing things, we just like to bring people in and give them some of the business experience and kind of help them connect the dots a little bit that at times isn't doable for a school, and then keep them in line in their in their college education. Because domain knowledge is huge is is you have to time it right with the real world job specifics. And also so they can make a living. And so we work on partnering with them all the way. So yeah, so they just need to sign up for the cyber four program that the big portion problem we run into is that we're starting to get ridiculous waiting lists, because we don't charge anything for our program either. And so that's one of the issues that we're working to break down. But you know, give us give us a holler and we want to help as many people as possible.

Brian Anderson - Telecomprehensive Solutions 2:21:43

Great. And Rachel, you did mention that you don't necessarily afford preference over one or the other, although you've spent more time in the four year recruitment model. But they do have a couple of, you know, two year associate degree level candidates that came in on the entry level. What were those additional steps that they were able to demonstrate that made them a consideration for that entry level position? And what was that entry level position? What did that look like?

Rachel Valentine 2:22:09

Yeah, so I would say so a few of those individuals started out actually with our three month intern process, which is more like a part time apprenticeship. And then at the end of the three months, we evaluated their growth and offered them a full time position, I would say, kind of going to the conversation in general, of what can students that are coming out with an a degree do to appear differently or get their foot in the door. And as we've discussed continuously looking for internships is a

great first step to building rapport with companies. But it also gives you something to put on your LinkedIn or your resume. Honestly, other things that students have done that have stood out to me is an it can be a challenge, because there's always that gap, right? where students are like, I'm trying to get experience and companies are like, well, you don't have experience. I'm having students that take initiative, and sometimes send me LinkedIn messages or emails to say, Hey, I was wondering if I could just spend a few minutes asking questions about your company, or they've done it to developers of ours. And I mean, I don't want our developers to also be hit up. But we have such a nice staff that there's actually been a lot of developers that have messaged me separately and said, Hey, I have this student reached out to me, they actually showed me some of their project work they're interested in applying or if we have internship opportunities, because there aren't any on our website. And they've been able to kind of get their foot in the door that way. So I think sometimes, again, that kind of comes down to personality, we're showing that personal initiative. But if you are talking to your students, and saying, Hey, we understand that, where you are, for whatever reason, you're choosing not to continue with your education, or you would like to just jump into the career field. Now start to think about those things. I know that I think when I joined in there was kind of a conversation going on about LinkedIn, teaching them the importance of, you know, being mindful of LinkedIn and utilizing LinkedIn to connect with companies and individuals at companies that they are interested in, you know, prepping them that they will probably get a lot of nose if they're reaching out to try and set up coffee dates or ask questions about a company. I mean, people only have so much bandwidth. And I know unfortunately, there's been students I haven't been able to connect with. But if I do have the time I try and I think that that's true. Probably a lot of people on this call that you know, want to see the next generation thrive and know that there's so much potential within the tech industry. So that's kind of a side thing. Again, I'm sorry, I kind of go on tangents, but hopefully some useful information though. Internships are just showing the initiative to try and get your foot in the door with conversations with companies, you know, building or reaching out to your network of understanding if a friend does get hired, or if your parent works at this company like thinking creatively to say, Hey, could you set up a time where I can speak for a few minutes? Some of those individuals, then, you know, because again, it comes to our company, we do web and mobile development. I've had those students then say, Hey, will you check out this mobile app I've built. So it shows me that they've done and invested in some personal development on the side, oftentimes, these projects start from classwork. And they just continue to build it further out, once that class or course is done. And I love it. And and while I'm not a developer, myself, I can kind of weigh in on enough of the basics, or if they really want to have a technical conversation, you know, I'm more than happy when someone shows effort on their end, to pull in one of our developers to be able to kind of discuss the technicalities of whatever system that they they've shared and wanted to present. So, you know, I do think that there's opportunities for students to find their foot in the door, but they got to think a little bit creatively and, and understand that, you know, there are more than just men that are doing this, and they might get knows, but that persistence, attitude, and, you know, continuing to work on themselves in the meantime, and, and willingness to show that I think it can open a lot of doors with companies.

Brian Anderson - Telecomprehensive Solutions 2:26:36
Absolutely. In distilling that down a little bit, I think, you know, really a fundamental skill set is networking, going outside of the classroom environment, finding groups that are aligned with your

interests, and going and meeting the people that are part of those, and whether that's, you know, going to a technology meetup, you know, there's plenty of those. There are industry events, there are conferences that oftentimes allow for students to come in at either, you know, free or severely discounted. And, you know, just cataloging those experiences as you go and making sure that you know, you're presenting that back, and create creating those opportunities in the innovation ecosystem. We call them creative collision opportunities. And when you're in an industry event, and doing the networking and building that relationship, and just showing that an interest, automatically, you're going to start setting yourself apart. And that's, you know, true, not only in business, but also, you know, in education as well. One of my good friends just graduated the robotics program at Cal Berkeley, and you know, 40 years old, went back to school later. Getting into Berkeley was a major challenge for her. And the we had a conversation about Well, why don't you go to Berkeley and start interfacing with the professors that are there and asking those questions. She had refused to do that. The first year, she applied for acceptance into the graduate program, and didn't get in the next year, she took that advice, went and did some networking reapplied, and the professors were familiar with her three of the professors that approved that application. Were personally familiar with her and said, Absolutely, we're going to go ahead and take a gamble on this person. So I think it's really important that people don't discount and really do prioritize that, that opportunity for networking. Let's see here as far as a need for an associate's degree to transfer in information technology, cyber cloud computing and DevOps. How important and how did you feel that that is again?

Rachel Valentine 2:28:49
You mean? Can you kind of further explain your question? Do you mean, for if I saw on someone's resume that they had an A and then transferred to a four year if that would be an issue or fine?

Brian Anderson - Telecomprehensive Solutions 2:29:03
Yeah, I mean, does that does that create any kind of advantage or not really?

Rachel Valentine 2:29:07
Um, you know, I think I'll be cognizant, I'll look at Okay, what was their area of emphasis for a program was their area of emphasis for their bachelor's. So sometimes it could create you know, it is interesting, like if people have gone from like a mathematical route or you know, electrical engineering or or different focuses that could be applicable based on projects are kind of, you know, that that fall in but aren't necessarily just a computer science title. So I'm usually aware of it, but I wouldn't say that, you know, it's a larger benefit or not. Sure. All right. No,

Brian Anderson - Telecomprehensive Solutions 2:29:52
I very much appreciate that. And Mike and Manish I'm going to just real quickly ping you. Do you have any thoughts? Adding to that or anything that we missed,

Mike Gentile 2:30:02
the only thing I would say is that we actually not as much, two year four year or anything in between, but we do really look heavily at extracurricular activities, you know, associated with what you're doing, how you're, how you're working in other groups, with whatever it may be either athletics or something of

interest to you, and how you participate in those things that actually can often give a lot of correlations about, you know, how you how you approach and how you may have some aptitudes and be successful for us. And I think that that is super, super important. It's also really super, super important. If you're with an organ, if you're a company, like a business services organization like us, that does work in a lot of different industries. So at Cisco share, we actually do work in the gamut. days, but a lot of times, many organizations that provide them some services will specialize in certain industries. So there's also some things that you that can be deduced via extracurricular activities. That will really help. And so I think that that's, I think that that's really a great way to differentiate yourself from the from the crowd.

Brian Anderson - Telecomprehensive Solutions 2:31:25
Absolutely. Industry specialization and virtualization is very open opportunity to differentiate yourself quickly and move into a particular niche. Manish Anything to add?

Manish Bhardia 2:31:39
No, I think Mike and Rachel have covered everything, so I'm good.

Brian Anderson - Telecomprehensive Solutions 2:31:45
Okay, great. So now, let's go back into some more of the industry trends in the shifts. You know, we've seen the rise of cloud computing, and those skill sets being necessary. cybersecurity, obviously, is coming to the forefront. You know, with recent, recent national developments, you know, there's been a lot of talk about, you know, security and certain things. Are you seeing a shift? We'll start with human age, are you seeing a shift in the use of logical security within the it skill set in the ICT world?

Manish Bhardia 2:32:20
Yeah, I mean, think security is becoming more and more important as things are becoming more accessible. Initially, it was segregation by the physical things, and now it's, everything is open. And the understanding of security also is changing very fast. So if the question is, is security becoming more important? Yes, absolutely.

Brian Anderson - Telecomprehensive Solutions 2:32:43
Yeah, absolutely. And let me ask you, specifically, with the implementation of AI, how important is analytics and AI in the logical security world?

Manish Bhardia 2:32:57
Oh, yes. So the thing is, of course, in the anytime, machine learning can be applied on the trends, it is going to be much advantage to see the thing is in the past, it would be you have the data and somebody is monitoring and acting on it, but not, you cannot do proactively without the help of machine. That's where the AI comes into picture, take the data let machine provides you more input or when I say machine, I'm talking AI algorithm, helping you with the, with the detecting trends or alerting you in advance. So these are new things anyway, coming into the picture about use of AI insecurity. So this is one of the area where data analytics, Ai, and security coming together. In fact, AI is going to be applicable everywhere there is a data. So security is just one area, it's a prominent area, because it

right away gives you the clear picture, but there are multiple other use of AI, which will be coming into picture very soon. Sure.

Brian Anderson - Telecomprehensive Solutions 2:34:09
And for our audience, logical security just refers to the application of software security within applications to make sure that sensitive data is being locked down and treated appropriately. And it's definitely not the only part of security that goes into technology security, there is physical security and cyber security, making sure that you know, workstations are powered down and that blocks are in place and access control. One of the concepts is what we call LPA released privileged access and making sure that only those people who need certain types of information actually have access to it at any certain level. So with that, Mike, I'd love to ask you from the system perspective, how important is logical security and what shifts are you seeing In, in that overall area currently,

Mike Gentile 2:35:02
so I think, you know, naturally, logical security is generally associated with actions that someone that someone does involved with the system or the service. So it's, it's often a very simple thing either not turned on or not turned off that back and create a real big issue on a massive scale and security, it's kind of like you're the goalkeeper in this this, you know, in cybersecurity, he's like, you can do great the whole time and you miss one little thing. So logical security is, is definitely important. I think also your other question around AI. So, the thing about AI is, it's been really problematic in cyber, because in order to really automate anything with an intelligence from an intelligence perspective, you actually have to understand the process steps first. And I think many times, especially in security, you know, all the investment and everything going on, people have launched all these AI technologies, we work with a lot of clients, it's been millions upon millions upon millions on these on these automation technologies in cyber that are literally sitting on the shelf, because they've never taken the time to develop the processes that are to be automated with that technology. And so why I think that's important is it creates a really big opportunity for people that are entry level, because they can start to just learn the process steps of how to apply security in any given situation, so that they can understand. And it's really important and often done looking at a process very simply in the beginning, before you can get to that automation place. And it's created a ton of demand in many organizations, because as I mentioned, they have all this technology that they paid for now, they're trying to build out the simple processes to apply it on top of. And many of those design and documentation elements can be done by junior level resources. So it's kind of the flip of everyone saying the AI is going to make everything go away. I actually think the opposite of that. And it actually can speed it up a little bit.

Brian Anderson - Telecomprehensive Solutions 2:37:11
Oh, absolutely. And, you know, we've done a lot of research in this area and AI, more than displacing opportunities, really what it's providing an opportunity to do is to free up human resources to go tackle human problems, which are those unknown unknowns, when they when they hit right, AI is really good at taking a database and something that it can report trends and statistics and analysis and models of behavior off of and see where those outlying events that may not be in line and would be those red flag issues need to be addressed and have a human then come in and intervene and understand what that resolution looks like. Rachel, I'd love to get your thoughts on this as well, from the logical security

standpoint, I saw you just answered a question in the chat. But between DevOps and sec DevOps specific into the programming side, how important is logical security for your programming team? And making sure that that is at the forefront of their design thinking? And are you guys doing anything with AI? In the programming role, not necessarily with security, but possibly or, you know, with user interface and graphic design and interoperability? What does that landscape look like for you?

Rachel Valentine 2:38:30
Yeah, so I'm kind of tackling the first question with regards to logical security. So obviously, security is a topic for every business. So it's, it's definitely something that we want our whole team to be cognizant of, of, a lot of the projects that we work on for clients, you know, there's, at the bare minimum of, you know, work that's typically going in for like authentication, you know, if there's any sort of login that's being built, or if there's payments being processed, so, things at that level from kind of the own, you know, workstation perspective, you know, we do teach everyone that, you know, when they start Now, granted, everyone is remote, but we go through the process of, you know, educating them that if you get up from your workstation, make sure that you're locking your computer so that no one can kind of jump on or access anything, even in meeting rooms, when you're having certain notes about specific projects, which are, you know, private to clients and their information, that that needs to be all wiped and cleaned up. From the DevOps perspective, yes, kind of addressing the question in the chat, you know, for us because we don't particularly have separate DevOps teams internally for us. Having kind of some basic knowledge around the CI CD process is is very valuable, kind of understanding just how deployment pipelines work. Things like terraform. Addressing the third question, sorry, I'm making sure that I've kind of trying to touch on everything. And I know we're going to be short on time, from the AI side of things. So, Vincent, we are based in Irvine, but our headquarters or our parent company is in Finland, and we do have a greater team that's focused on AI development there. It's not something that we have implemented for many clients here locally in Orange County, so I can't comment too much. But I will say that, obviously trends of the future and, and kind of, you know, popular buzzwords and things for students to be aware of, you know, do include, you know, AI and AR and VR. And those are avenues that we're exploring and how we can make sure that our development teams are up to date dependent upon if we were to have client projects come in, but I can't really speak too much about our teams currently.

Brian Anderson - Telecomprehensive Solutions 2:41:09
Sure. And I'm going to insert something that I think is just kind of interesting that I think is sussed out a little bit as we've gone through this, Mike, you had mentioned that you've got clients who've invested millions of dollars in AI software that's still sitting on the shelf and hasn't been implemented. And I believe that a lot of that is because there is such a huge perceived divide between the technical skill sets to actually implement some of these things, and the way that people work from a from a non technical perspective. And so one of the big trends in the industry lately has been around what we call NLP or natural language processing, which would be alexus skills, you know, hey, Google, you know, those assistant type environments and getting your AI to actually have a native language based interface for, you know, the queries and the things that you want to get done? What trends are you seeing Rachel in that area? with Adobe? Are you seeing that come up at all?

Rachel Valentine 2:42:09

Yeah, a voice is definitely a huge thing. I'm very happy we actually stole someone from Amazon that previously worked on the Alexa team. So building out our team and, and skills based there, you know, an exercise that we've done recently in trying to understand, okay, what are what are industries, market industries doing to, you know, kind of go next level, obviously, with COVID, everything being so digital, and the digital focus, you've seen a lot of these brick and mortar companies come, you know, online are needing to really force online and, and now we're seeing where, like, beauty brands and, you know, other big companies are just integrating so many kind of, I like to say they're crazy, just because I never thought that I could be looking at something like we were doing something for Yamaha, where you could basically see the size of your boat in your garage, using AR. So you know, I think that it's, it's having the technologies like working with NLP and other kind of machine learning type languages are beneficial, because going into, you know, data. But yeah, I think, looking at or talking about voice and being able to integrate that into projects, thinking about AR and VR functionality. I mean, that's just something that now there's even starter kits for students to be able to get started with. So like AR VR is something that can be totally digestible, and is really going to be advantageous when looking at and presenting that skill to companies as more clients are starting to integrate that into their, you know, service offerings when you're looking at their, you know, mobile apps and functionality.

Brian Anderson - Telecomprehensive Solutions 2:44:06

Absolutely. Great. Thank you. Just real quick, we've got just a couple of minutes left. So I do want to tap Manish and Mike, but let's keep our answer just to about a minute if we can. Manish from that perspective for natural language processing specific to the AI that you work with and chatbots How important is that skill set? And what does that growth opportunity look like?

Manish Bhardia 2:44:28

Yeah, I think it's a it's a great opportunity the market for the chatbot or the let's call it conversational interface, where instead of clicking on the things or application menu based, you will be talking or chatting with the applications. So conversational interfaces going to be the entry level. Very easy entry level AI use case for now. As we know AI takes a lot of money, time and energy to implement for small companies or midsize However, the kits from Alexa or Bot Framework from Microsoft allows you to use traditional applications and have a conversational interface in front to make an AI based application. To start with, I think this is a good, good way for existing applications to start latching the waters of AI. And there is a big growth potential and could be a good part to AI for all businesses and all students also.

Brian Anderson - Telecomprehensive Solutions 2:45:34

Absolutely and Mike specific to the security side of things where we do have this growing divide between the business operation side, which is still important in establishing security parameters, and the technical side of actually delivering those things. How important is this an NLP development? And, you know, what does that growth opportunity to look like in the cybersecurity space?

Mike Gentile 2:45:55

Sure, well, I think more you know, at the heart of it is you're getting technology into every conversation, right? It's listening to everything in the home, it's listening everything at work, and getting involved in the

interfacing into the technology. So I think some of the real opportunities, especially for people trying to get in there is privacy, understanding privacy, in terms of when it can be turned on, when it can't, what it can listen to what it can't, how it should process those and flag in situations. And it's kind of a different discipline. But if you know that if you if you understand privacy, right now you are valuable, moving forward. So that's one thing. And then the second portion of that would be again, you know, with Alexa, or whatever it is, it's interfacing into other technologies, you know, my Alexa integrates into my ring camera now and everything else. So once you start getting all that interoperability into everything, you have to have that expertise to secure that. And so I think there's a lot of opportunity there as well, both with designing it and and then administrating it and insert in a lot of situations.

Brian Anderson - Telecomprehensive Solutions 2:46:57
Oh, absolutely. And, you know, I wish we could keep going on for another couple of hours, because there's so much ground that we still haven't covered, including, you know, from the telecom perspective, you know, 5g, what that, you know, competency looks like and how AI is going to be interfacing with the amount of datasets that are going to become available to us because of 5g applications. So perhaps we might be able to do that for another panel sometime down the road. But thank you all for your time today. And for participating. I think it's been a wonderful discussion. I just want to get kind of Final thoughts. Pick top three programming languages that you think are in demand right now. And we'll use that to close out. So Mike, what are your top three?

Mike Gentile 2:47:41
Really programming languages is not as big on us, it's going to be more specific tech is going to be specific technologies with what we're doing unless you really go in on the development.

Brian Anderson - Telecomprehensive Solutions 2:47:51
Okay. And Manish?

Manish Bhardia 2:47:53
Yeah, I would say Python, then databases skills, and then general cloud understanding.

Brian Anderson - Telecomprehensive Solutions 2:48:00
And Rachel.

Rachel Valentine 2:48:02
Yeah, I would put Python there is as valuable as well, JavaScript, and a lot of the frameworks within it are just what we work heavily with. I also agree having exposure and experience to those SQL and no SQL databases. It's just very useful knowledge in general, it's going to be applicable.

Brian Anderson - Telecomprehensive Solutions 2:48:24
Absolutely. All right. Great. Well, thank you, everyone, for your time. We appreciate you joining in. Brian, I'll turn it back over to you.

Dr. Brian Dozer 2:48:31

Alright, thank you very much. And thank you to Rachel Manish and, Mike. That was fantastic. Even for someone who is so tech illiterate or ICT illiterate as me. So I really enjoyed it. And hopefully all of our panelists, that is our I'm sorry, all of our participants that as well. Um, are there any other questions from anyone? If you have a question? We have a couple minutes. You know, turn on your camera and feel free to ask away. Okay, if not, just real quick.

Russ Alizadeh 2:49:09
This time, but I'd like to ask a question. Sure. If I may, and the question I have, I have a two different type of student. Some do as a mission adult learners. And they have different challenge and unfortunate is age discrimination it so I try to advise them to get into areas that maybe they won't have that kind of, you know, major discrimination against them, especially if you're over 50. So like to see if there's any advice on that.

Aurea Lawson 2:49:56
Mr. Anderson wants to answer first. Yeah,

Brian Anderson - Telecomprehensive Solutions 2:49:59
I would say say that it's becoming less of a concern than it has been historically, with the, with the virtualization of the workforce, specifically due to COVID. And a lot of the skill sets and opportunities that are out there, employers really are just looking for people that fit with the culture and can do the jobs and that they can bring up into certain skill sets. And so yes, there is some ageism, there is sexism that exists in the industry, I think that there are a number of organizations that are really working to, you know, try to overcome that. Specifically, you know, we've got programs here in Orange County, through the United Way to upskill workers and, you know, get people from, you know, lower paying entry level jobs into this middle sector, by providing some of those skill sets. And, you know, what we really have seen, I think, across the board in the industry is the gravitation towards upper level executives. And I think Mike, Mike kind of commented towards this is, is that middle area skill set and some of the junior skill sets, we really need pathways within the industry right now and a talent pool to feed into them and allow this, you know, area to grow and provide that security and that support in the technical realm. So yeah,

Mike Gentile 2:51:22
we, so we partner in that up skills program United Way and one of our community partners that, that work and get us people in cyber forward. And I think, I think the the big thing is, again, just believing that you that you can do it, especially in cybersecurity can be intimidating. And so it's thought to be highly, highly technical. So, you know, I think just having that confidence to be able to get in there and start working on it, I would say also, there's a ton of great programs out there to pick up some of the supporting technologies that you absolutely have to know to be successful. Through like other programs, even United Way and up skills. So understanding how to use Office, understanding how to actually do like pivot tables in Excel, things like that, and manage data is humongous. And it can be learned quickly, if you haven't had that type of exposure, and then just get it and then just get in there also be willing to make perhaps look at, you know, something called a junior level job, even if maybe you were senior level in, in other parts, in other careers and other things that you were looking to do.

And coming in there, and especially in cyber, if you get a job anywhere, you're going to probably you know, it's there very high, it's very highly paid profession, even at the junior level. So you can start moving up really quickly, in that way. But I would say in our program for cyber force, we actually have a very, very healthy distribution of age, up all the way through 15th. And ongoing in terms of coming through and being successful in the program, as well as we have 20 year olds in the program that are that are successful, until we launched now are down to 18. And under a little bit as well. But yeah, so I think those would be some of the of the of the, of the considerations. Absolutely. And

Brian Anderson - Telecomprehensive Solutions 2:53:18
if I can add one more thought, one thing that we've seen across the board, and there's a lot of data around this, is that, you know, generally younger males are going to be more aggressive in their application process, they may only have what they about 40% or 45% match in skill sets. And they'll still apply for a job, where we see that, you know, females of the same demographic generally won't apply for that job unless they have 65 to 80% of that matching skill set. And we see that as well in some of our older population as well, you know, our 50 plus workers, if they don't feel like they have a direct match, they're less likely to actually apply because of that fear of rejection. So if it's my one encouragement to everyone is if it interests you, and you think you can do the job apply, you know, you we will teach you the skill sets, you know, employers are really good about, you know, identifying what those gaps are, and upskilling their employee is on the job and customizing that. So don't let that be a barrier that you don't have 100% match to whatever, you know, hard skills may be listed in a job opportunity.

Dr. Brian Dozer 2:54:28
All right, thank you very much. You know, as Brian said earlier, we probably could go for the rest of the day with questions and more topics to cover. But out of respect for everyone's time, you know, we're going to proceed to start wrapping it up. So just real quick, again, for all of our education partners you have access to actually for every one you have access to socio. I think net is going to post the information in the chat for you to be able to access it. I do want to switch over and just show something real quick. in there. So I was actually just noticing if you look, that is actually at a has posted some information that has come out today. So the Microsoft training The link is in here. For those of you who had questions about that, one of the other great things about this is if you scroll down and look at users, everyone who has registered with the with sociaux, is listed in here. And so we do encourage people to reach out to others and network. That's a big part of the regional advisory boards, it's a big part of certainly the ICT industry is is networking and, and getting in contact with others and all of us working together. You know, it sounds like from Charlotte, that there's ample opportunity for our students out there. And so, you know, the more we can all work together to get them trained and, and prepared for their careers, which is, you know, the mission of final link, the better for them. And so, Aurea, do you have anything that you want to add?

Aurea Lawson 2:56:04
Um, feel free to email me if you do have any questions, or my director Neda. If you have any questions about the website, if you need help with access, or finding the correct information, and then I have

posted the ICT evaluation link in the chat, I will also email it to you, in case you you log off a little too early. I missed it. But it will also be accessible on the app as well in that same folder. So

Neda Arab 2:56:39
when you log into the ICT advisory board page, you will see an internal link that says ICT evaluation, click on it and it will take you to where the evaluation form.

Aurea Lawson 2:56:51
And then since this meeting was recorded, you will receive it if not Monday, then Tuesday, I believe will take about three or four hours to download. But I will definitely have it sent out to you before next weekend.

Neda Arab 2:57:05
And to answer a couple questions, the recording and the transcript will be available.

Aurea Lawson 2:57:10
Yes.

Dr. Brian Dozer 2:57:11
And then I just posted the link to the to the desktop version along with the access code. And the beauty of zoom these days is we can actually a fairly quick transcript from from the recording. And so the recording and the transcripts, everything will be posted on the app. And then eventually for those of you who are used to going to our website. Once the community sunsets at the end of the year, we'll migrate everything over to the website. But for now, because of the additional functionalities around networking and access to documents and videos and things like that. We're going to leave everything in the soco app and ask everyone to access that. So again, if you ever have any questions, for anybody at vitalink, its first name at vital link OC org. You can also send an email to info at vital Inc, OC. org and we're happy to help you.

Neda Arab 2:58:07
And just one final note for all of our teachers are participating from the K 12. Part. This is the same meddling cosi app that we have for all of our virtual events. So on the phone, it is the same app, you just have to go to the main community page and select the community that you want to go into. So for this one, you would click the regional advisory boards for the desktop version, where you have separate URLs for each of the communities. If you are missing a specific URL, email Aurea or myself and they will give you that URL. But on the desk on the phone version, it's super easy for you to go.

Dr. Brian Dozer 2:58:44
You can also just search like in the Apple Store for Vital Link and it literally will pop right up. So again, thank you very much for to everyone to all of our business panelists, all of our college presenters to all of our attendees. You know, this is our our first regional advisory board on the socio zoom platform. And we're very excited about it. And you know, just let us know if you have any questions or having trouble finding anything. All right. Thank you very much. Thank you.