

Women in Business and Technology

Transcript of Episode 013 - Rearchitecting the tech pipeline with Kal Viswanathan

Featuring: Emily D'Andrea, Kal Viswanathan

Summary: Prepare to be inspired! Colleen sits down with Kal Viswanathan, a HoloLens Principal Software Engineer by day, and a philanthropist at her very own Kal Academy by...weekend. But before that interview, Sonia talks to Emily d'Andrea to learn about Women Think Next and the organization's upcoming programs that our listeners can join. Finally, in Cutting Edge, Colleen and Sonia discuss an article about this year's Consumer Electronic Show and the event's lack of female keynote speakers.

Find audio and more information at Microsoft.com/WIBT

NARRATION: I am confident, because if you look at the numbers from where we were 10 years ago, 15 years ago to now, yes, it is growing. Sometimes it's growing at a very smaller pace, but sometimes it's growing faster than we think. But I know for sure in probably 10 years down the road, or 15 years down the road, it's going to be completely different than what we see today.

NARRATION: HIMSS 18 is the health IT conference where professionals from around the world connect to gain the education, innovation and collaboration they need to continue to transform health and healthcare through IT.

NARRATION: Microsoft will be onsite in Las Vegas at HIMSS 18 from March 5th through the 9th to showcase the intelligent services and the trusted platform for solutions that engage patients, empower care teams, optimize clinical and operational effectiveness and transform health in the face of increasing cost pressures.

For more information about the conference visit aka.ms/HIMSS18.

NARRATION: You are listening to the Women in Business and Technology podcast from Microsoft. In each episode you'll hear from women in amazing technology and business roles as well as male allies who are working to make the industries more inclusive. We're doing into programs that promote greater diversity in the pipeline and bringing you tips on how to build a successful career in a supportive community. Welcome to Women in Business and Technology.

SONIA DARA: Welcome to Episode 13 of Women in Business and Technology. I'm Sonia Dara.

COLLEEN O'BRIEN: And I'm Colleen O'Brien.

SONIA DARA: We're starting the show in our Community Connect segment with a conversation that I had with Emily d'Andrea, a Program Manager and Digital Coordinator of Women Think Next, a worldwide community for professional women to network and create business opportunities.

COLLEEN O'BRIEN: And then, we'll jump into an interview I had with Kal Viswanathan, a Principal Software Engineering lead on Microsoft HoloLens, and the Founder of Kal Academy, a nonprofit coding academy focused on advancing the careers of women in technology.

SONIA DARA: And then, finally, we'll wrap things up in our Cutting Edge segment with a discussion about gender representation at the Consumer Electronics Show or CES.

COLLEEN O'BRIEN: Sonia, welcome back from your trip. How was your time in Wisconsin?

SONIA DARA: It was great! I got the chance to travel to Madison, Wisconsin, this week, in the middle of winter, so it was like zero degrees. And I had to find my puffy jacket from Boston. But it was great. Got to do a video shoot for Surface out there with a customer of ours. So yeah, it was really awesome to see really how artistic and creative people can be using our devices.

COLLEEN O'BRIEN: Yeah, that sounds awesome.

SONIA DARA: And what about you, what were you up to in Seattle?

COLLEEN O'BRIEN: Well, locally, I stopped by the Bumble Bizz Seattle Launch event at The Riveter.

SONIA DARA: Oh, man, I'm bummed I missed that.

COLLEEN O'BRIEN: Yeah, it was really great. To our listeners, you may have heard of the dating app, Bumble. Well, within that app, you can toggle over to Bumble Bizz, and network with professionals in the area. So it's a multi-purpose app.

SONIA DARA: Cool.

COLLEEN O'BRIEN: Yeah, there were about 100 women who attended the launch event, which featured an amazing panel of local Seattle women business owners.

SONIA DARA: Anyone I would recognize?

COLLEEN O'BRIEN: Yeah, totally. I know what a big fan of Rachel's Ginger Beer you are. Rachel Marshall of Rachel's Ginger Beer was there. Sarah Bird, she's the CEO of Moz. Jussi Duley of BurnCycle, and Monica Dimas who owns a few great restaurants, including Tortas Condesa, one of my personal favorites. And a big conversation theme this panel was about this idea of second acts or second chapters

So instead of thinking about your career as one long path, or one gigantic ladder, they encouraged this idea of trying something new, you know, of working at a startup if you've only ever worked at large corporations; or working at a large corporation if you've only ever worked at startups.

SONIA DARA: Yeah, we definitely saw this with the last episode's guest, Megan McNally, who seems like she's on career probably number three at this point, nonprofit professional, lawyer, now an entrepreneur. Yeah, same idea.

COLLEEN O'BRIEN: You're right. Yeah, Megan is such a perfect example of this notion of additional chapters beyond your first foray into professionalism.

SONIA DARA: What about this Bumble Bizz app? Like are you using it now? Are you networking through it?

COLLEEN O'BRIEN: I tried out Bumble Bizz for about a week, and while the concept is interesting, it connects people based on geographic location, it seems like a much better tool for freelancers, for people who hire freelancers, or for people in business development who are constantly looking to connect with new people.

The connection suggestions for me were a bit random, just because they were based on geography, and I like to be really intentional about my networking. But, you know, I'd encourage you and our listeners to check it out and let me know what you think! You just need to download the Bumble app from the Apple app store or from Android Apps on Google Play, and choose Bizz mode to get started.

NARRATION: Community Connect, get involved and stay connected.

SONIA DARA: I'm very happy to have Emily d'Andrea here with us in the studio. She's the Program Manager and Digital Coordinator of Women Think Next.

Thank you so much for joining us today.

EMILY D'ANDREA: Hi, Sonia. Thanks for having me.

SONIA DARA: So Emily, do you mind explaining to our audience what Women Think Next is?

EMILY D'ANDREA: Yes, absolutely. Women Think Next is a worldwide community for professional women. It was initiated by Microsoft and it's sponsored by Microsoft. It was created in 2008 by women in India and Israel as a way to actively contribute to the growth of professional women in the tech industry. Since then it has members across Europe, the U.S., Asia, Africa and the Middle East.

The goal of Women Think Next is to bring together women from various roles and disciplines across the tech industry, so think marketing, IT, research, engineering, finance, you name it, and it's really the great community for networking, creating new connections and building business opportunities.

SONIA DARA: So what programming does this community offer?

EMILY D'ANDREA: So Women Think Next is predominantly focused around events. With global events, we hope to provide women in tech a platform for great conversation and professional growth. You know, while we're all working in tech, it seems that we so rarely have the opportunity to meet women from different companies or working on different teams or products. Women Think Next is designed to provide that forum for connection to others and for learning from others.

So we have approximately 30 events scheduled globally this year so far, including one in Seattle.

SONIA DARA: Wow, that's awesome.

EMILY D'ANDREA: And then, in addition to events, we also have a monthly newsletter that shares inspiring stories, profiles of women working in technology, as well as fun event photos and recaps and registration for those upcoming events worldwide.

Listeners can sign up for the newsletter at aka.ms/womenthinknext.

And, finally, a little tip, I might recommend following @MicrosoftWomen on Twitter, we also share stories and event information around that community.

SONIA DARA: So what is the next event that our listeners can participate in?

EMILY D'ANDREA: Well, Sonia, as I mentioned, we have about 30 events scheduled globally. So the best bet really would be for your listeners to subscribe to our monthly newsletter so they can keep up to date on when an event is happening in their city.

SONIA DARA: So what type of content can people expect to see at an event if they were to attend?

EMILY D'ANDREA: Women Think Next events are really cool, because they can take a variety of different formats. I've been to the Seattle event three years running, and while it always takes a new shape, there's certain aspects that you can always depend on.

So, first, you are definitely going to find inspiration. We have leaders across the tech industry sharing their own professional experiences and advice with attendees. Topics range from professional development to digital transformation to cybersecurity to mentorship, it's across the board.

SONIA DARA: Awesome.

EMILY D'ANDREA: In addition, because there are such a large variety of women from so many different companies represented at Women Think Next events, you might also have the chance to learn more about potential career opportunities or connect with women that are working on projects or in roles that are of interest to you. You might even find a mentor or a sponsor.

But no matter where you attend a Women Think Next event, you know you're in for a great time. I attend a lot of events, Sonia, throughout the year, and Women Think Next is absolutely my favorite, hands down.

SONIA DARA: Awesome. I'm looking forward to attending the next one.

So one more time, where should people go to learn more and to get involved?

EMILY D'ANDREA: The best place to get started is aka.ms/womenthinknext and by following [@MicrosoftWomen](https://twitter.com/MicrosoftWomen) on Twitter.

SONIA DARA: Awesome. Thank you so much, Emily.

EMILY D'ANDREA: Thanks for having me.

NARRATION: And now let's get on with the interview.

COLLEEN O'BRIEN: I'm thrilled to welcome to the studio Microsoft Principal Software Engineering lead on the HoloLens Team and the founder of Kal Academy, Kal Viswanathan.

Kal, welcome.

KAL VISWANATHAN: Thank you, Colleen.

COLLEEN O'BRIEN: Can you tell us a little bit more about your background and how you became interested in computer science? What was your upbringing like?

KAL VISWANATHAN: I actually wanted to become a doctor. It was so completely opposite of where I ended up being. But growing up in India, obviously as my dream was to be a doctor, but then we were able to afford for computer science more than being a medical professional. So I entered into that field of learning computers from kids around in my neighborhood. They came and taught me math. And I mean math is probably part of my childhood, but computer science is more or less learn to code. And in exchange I taught them math and science, so it was a way of growing up learning from others and that got me to the place where I wanted to be today which is obviously the number one or top 10 IT companies in the world, right, so being in Microsoft. But that's the journey that I'm here.

COLLEEN O'BRIEN: You bartered with your teaching skills.

KAL VISWANATHAN: Yes, exactly. It's a way to put it.

COLLEEN O'BRIEN: And you have both a Bachelor's and a Master's degree in computer science, why did you decide to pursue those graduate studies at Western Michigan after getting your Bachelor's degree in India?

KAL VISWANATHAN: My family is all about education. They drive towards getting the best out of it and many of my uncles have Ph.D. in computer science, as well as in other areas in their life. And so education has been something that we were brought up with and so I wanted to actually attain my doctorate, but I think I was at a point where I have to make income to help my family. So I did my Bachelor's, but I had a dream way back in my eighth grade to be in the United States and because I heard about at that time that this is the home of the free and this is a place where you can make your dreams come true.

So hence, I decided to pursue my masters in the United States. So I got to Michigan. I got accepted in Yale and California as well, but Michigan was the place where they gave me the full grant and gave me a teaching assistance-ship which was really thrilling, because I could continue my teaching background. Hence I chose Western.

COLLEEN O'BRIEN: And I know that you continued your education, as well, in some of my research I found that you did some work at Johns Hopkins. Can you tell our listeners a little bit more about that program in biomedical engineering, it seems like you're veering away from computer science a little?

KAL VISWANATHAN: So that actually tells you that my passion in medicine is still around, right. So in the last few years, at least, I have been dreaming about going back and getting my Ph.D. But every college that I talk to they're like you've got to quit your

job to do a doctorate. So I was trying to figure out what other ways I can go. Because the education is something I love. I want to keep learning throughout my life. And so hence I looked around and I found this great online opportunity, which is that I can pursue a combination of computer science and medical and learn from that and that's where I reached out to John's Hopkins. I sent my application in and got accepted into the program.

But it's a slow-going process and I've only done one course so far. But my goal is to eventually see how we can apply all the computer science algorithms into medicine and see what I can do about it.

COLLEEN O'BRIEN: It seems like such a critical intersection, computer science and the bio and healthcare world. Whenever I go to my doctor she carries around this brick of a tablet, the software is really old. So I know that you can be incredibly innovative in that space.

KAL VISWANATHAN: I mean it also tells you that computer science is everywhere, right.

COLLEEN O'BRIEN: Absolutely. You've shared a little bit about your philosophy and your passion for education. How do you think about your personal development? I think you've hinted at not wanting to go back full time or maybe leave your job but how do you chart your personal development and think about that?

KAL VISWANATHAN: The best way to learn is by experience. It's very hard on the computer science specifically is that every day something comes up? Every day there's something new. Look at Amazon. Look at Azure. Look at all these places. They release something every time. So one of the ways I have at least looked into my development is pick up something new every week, right, or ever two weeks sometimes depending on the workload and try it out, try something let's say if it was a new Azure thing that Microsoft released and I would go build a small app around it to see at a high level of I can understand that, not too much in depth, but that way I would have a breadth of knowledge and at any point in time if I need to go deep down I would go get that done, because now I have a fair idea of what that application is, or what that software is. And that's what I've been doing.

That way I'm completely aware of anything new coming out in industry, as well. At the same time I'm not afraid to dig deep and by doing, by keeping up to date, because in the past when I was growing up in my career I would not look at all these things, just focus on my job, just keep straight at it and just do C++ or C#, but then I was so afraid to try new things, because there were so many. It was like it keeps adding on top of it. But by doing this I can be at any spot anywhere, talk about anything, and when people tell me about it I know this, because I've tried this out recently. That's where I feel like this kind of development is much better.

COLLEEN O'BRIEN: And I think if you're staying on top of your skills week over week, or on a bi-weekly basis. It makes the innovation that's happening so quickly in technology more consumable if you're breaking it up. And I admire that you're jumping in and doing something. I read a lot of headlines to try to stay up to date on what's happening in the news and I think it's great that you actually are going in and learning for yourselves what that technology means to you.

Kal, the majority of your career in technology has been at Microsoft, what attracted you to this company and is that different from what brought you back after you worked at the GE healthcare company paradigm.

KAL VISWANATHAN: Microsoft is my dream, for sure, because when I was growing up I don't think there was any other company as prominent and as big as Microsoft was in every country in any part of the world everybody talks about Microsoft, right. So it has been my dream at the time without knowing what this company was about. It's just that I heard about it. I know I want to work there. To be very honest, that was the first thing.

But then the more I learned about computer science the more I did my Master's, again, it was way back in the '90s, and still Microsoft was the biggest in the industry. It became more clear that if I want to do something different in this field. I want to be in top industry. I want to be working for the company that does more relevant things in the field about that. So, hence, that became more clear with my dream, right.

But the real truth behind this is I really admire Bill Gates for all the philanthropic work that he does and I don't think any new companies, any newcomers out there today, or any big companies are out there, they're doing as much as what Bill Gates does, right. That's what fascinates me more. I want to be more of that. I like the giving aspect of it. I like how company, Microsoft supports that and encourages every one of the employees to do that. That's really when I think about the different stages in my career the initial stage was I want to be in top 10 or the top spoken company in the world. Then I realized that the different company products that Microsoft releases. But now it's more about this giving, the philanthropic, the thing that I believe in, that Microsoft supports and I want to stick with that. I want to be part of that.

COLLEEN O'BRIEN: You're absolutely right. Our Microsoft's team here at the company they have a phenomenal employee engagement program. For each employee they match dollar for dollar up to \$15,000 charitable donations to qualified non-profits. They donate \$25 for every hour that employees are volunteering at nonprofits. And they match, I think, the dollar value of products that we're donating, which is really admirable. And I think that you speak to something that I've experience, as well. I joined Microsoft right out of college and the top priority for me was get a job, get a job that will help me pay down my student loans. But as I've spent more time here I've

come to find more important in working at a company that aligns to my personal values. And I really agree that Microsoft has been that for me.

KAL VISWANATHAN: Exactly.

COLLEEN O'BRIEN: So here at Microsoft your role is as a principle software engineering lead on the HoloLens team. Can you give our listeners a bit more information on what your day-to-day looks like? Is it all holograms?

KAL VISWANATHAN: Obviously HoloLens is a next generation of new things to come about, right and it's still in its infancy, but I get to work on the coolest product in Microsoft and I own about six different features in the product. And if you want to check it out you can go to the store today, in Bellevue store or in Seattle and you can actually see on the screen the very visible aspect of what we call as a mixed reality portal that is my feature. My team builds that and the idea is that you can get to see what the user sees in their headset in the portal, right. It's a vision, it's a way to share things and that is the more prominent feature that I own or my team.

But my day-to-day job includes working with the smartest engineers out there and managing them as well as working alongside with them learning all the neat tricks that you can do in this virtual world, right. And so this is just like any other engineer. It's all about fixing bugs, writing more new code, at the same making sure that the employees are happy doing what they're doing and managing stress. These are all part of my day-to-day job.

COLLEEN O'BRIEN: We've said in a few articles on this show in the past about the fact that virtual reality augmented reality, mixed reality, because this is such a new field it allows for more inclusivity. This is something we spoke with Donna Sarcar (ph) about on the first episode, you know, because no one is an expert in this space yet, it's sort of an equal playing field for everyone to be there. Do you see greater diversity on the teams that you're working with today than maybe you have in your previous software engineering experience?

KAL VISWANATHAN: It's a tough question. When you tell me about diversity, my thought goes in two different ways. One, we talk about diversity from including different perspectives of people in the team that can bring different values, right? So that is one way you can think about diversity. The other way you can think about diversity and inclusion is, do we have more percentages of women and different ethnicity of people around the team, right? These are the two different ways I look at diversity.

If I were to answer the former, yes, this team contains people coming from different backgrounds that are smart in different ways, like from hardware to being in the physics area to being core algorithms and what-not. So it's a different perspective of people

how they think about a product and bring them together. Whereas the percentage of women and the inclusion of the different ethnicities is still very less compared to any other team in Microsoft, because of the hard-core nature of what this product expects from people. And so I'm still figuring out how we can grow that in the team, but it is comparatively lower compared to any other team in Microsoft is.

COLLEEN O'BRIEN: Interesting, and I know that this is a particular area of passion for you.

KAL VISWANATHAN: Yes, it is.

COLLEEN O'BRIEN: So we'll get into that. In addition to working at Microsoft full-time, you are the founder, president and head instructor at Kal Academy. Can you explain to our listeners a bit more about what Kal Academy is?

KAL VISWANATHAN: Yes. So that actually is the dream of mine, which is to provide affordable technology education for women and people of color and make it affordable in the sense it's not like any other boot camps where you have to pay \$30 grand or \$50 grand out of your pocket, quit whatever job you have to just try out technology.

So my passion towards starting this academy was that if anybody out there, whether it's women or people of color, or even men that matter, if they are in a different field but not enjoying what they do, but they want to see what this high-paying technology job can do, but they want to give it a try without having to quit whatever puts food on the table.

So that's why my academy is focused on weekend classes, and we provide basic introduction to programming all the way up to getting people prepared for technical interviews to go face these employers in the industry. That has been our focus in the last three years that we have been a nonprofit organization in Redmond. And we have placed about 200 people into technology jobs, and that's a big feat for us, actually.

COLLEEN O'BRIEN: That is amazing. Congratulations.

KAL VISWANATHAN: Thank you.

COLLEEN O'BRIEN: How is Kal Academy different from the other code boot camps that are out there today?

KAL VISWANATHAN: To give you a bit of background, I have taught at almost every college in Washington, here, including UW and Bellevue College to city universities, and many boot camps call me to come and teach there as well. One thing that I've found that I want to do differently with the academy is that with colleges and with boot camps, they focus more on how the curriculum is trained. They focus more on, okay,

what is the certification path I want to get these students, and so they inject more of I'm going to teach them nine different things that they need to know and hence I can provide them a certificate and they get out. And, hence, it's like eight to five training that they give you, and when you get out of it, after nine months or six months or whatever be the time, you cannot look back and say, what did I learn, because it's just becomes like another college degree program.

I look at the academy and say, I want to do something that is applicable to an experience if I get a job tomorrow. What are the things that I can take away, and if I am one of those people that can pick up some things and then I can go learn on my own more on top of that? I don't want to be hand-held in every area aspect of it. Can you just tell me what are the things I need to know, just get me bootstrapped, just get going, and then I'll go pick up more?

And that's what this academy is for, because, as I said, it's for people who come from completely different backgrounds, like chemist, or biologist, or recruiters, or people with no jobs today, they come to my academy, they get introduced to programming. They get to learn it. So it's all hands-on. After that, it's like, okay, now what you learned, go do some projects on top of that, and then either come back to me, get prepared for interviews, and then they are in the job.

We also partner with quite a few consulting companies to provide them projects so that they can get hands-on experience with it. But that's the idea behind it. I differentiate myself as that you're paying \$50,000 or \$30,000 to boot camps because they're teaching you ten different things out of which you probably use one of them when you get into a job. So I focus on just those things that are needed, because I work in this field and I'm a role model for many of these women in that area to say, okay, this is what it takes to be here. And that's what I try to do.

COLLEEN O'BRIEN: It sounds like Kal Academy offer more a la carte options.

KAL VISWANATHAN: Yeah.

COLLEEN O'BRIEN: So it's not based on the certifications or like the cookie-cutter programs that many of these code boot camps are offering. Instead, it sounds like you are keeping an eye on what's happening in the industry and figuring out what are the five top skills that a student needs to know now instead of that cookie-cutter programmatic sense. I think that's such a great and agile way to think about coding and learning in this day and age.

Can you share what your work with Kal Academy looks like? Specifically what are you doing at Kal Academy?

KAL VISWANATHAN: I mean, I'm the only instructor for Kal Academy, so after my day job here during the weekdays, I teach from 8 a.m. until 8 p.m., both Saturdays and Sundays, at my academy.

COLLEEN O'BRIEN: Okay, let's just make sure our listeners heard that. After working at Microsoft Monday through Friday, on Saturday and Sunday you teach from 8 a.m. until 8 p.m.

KAL VISWANATHAN: Yes, I do.

COLLEEN O'BRIEN: Okay, keep going. Just needed to catch my breath there.

KAL VISWANATHAN: I think once you find the area that you're passionate about, I think the energy comes to you automatically. So that's what I've been -- I've been teaching for 20 years here in the United States, so teaching is part of my blood. But now that I have my own academy, I think my energy is double what I had before, because I can do what is right for the student, I don't have to think about a process put in place. I don't have to think about writing everything down and getting approved by a big board and what-not.

I've got many students who come to me and say, I want to learn about cloud computing, because my work needs it for me, or that's the buzz word that recruiters are using, so can you teach me? And that's it, I start a new class. I say, okay, let's go do this, and keep it as a la carte as you said it is so that they now get to know everything about Azure in about six weekends, and then they go play with it.

So it's kind of like me, how I learned and how I grew up in my career to be where I am today. I want to expose that to these people. And one thing I've consistently seen with these students is that the more I come and do that on the weekends, they really look up and say, I want to be like that. And so I build the boldness and the confidence in these women. And that's the best that they get out of that. They get to know how to face work every day and get to know how to learn new things if they're just thrown at them, because ambiguity is one thing that we all have to get used to. And that's what these women are getting at.

COLLEEN O'BRIEN: You mentioned the 200 students who have graduated from Kal Academy that you've helped place in jobs. Can you share any additional success stories, maybe a student that you're particularly proud of?

KAL VISWANATHAN: Yeah. I mean there's quite few. A couple of them that I can tell you about. So I had, without giving all the names and details of it, I had a student who could not afford to pay for these classes, and I provide sponsorship for those students. So she came to me because she was working at a place where she was working at Autoverse (ph), and it was more or less like a lab, not a pharmaceutical but a medical

lab, where she would receive in the middle of the night she would receive a part of a hand, or part of a leg, or something. So it was a very gross -- I don't know how to explain that.

But she was at a point in her life that she can't do this anymore, because she would work late nights and then she wouldn't get to sleep the whole day because of these different things that happens in our life, and she wanted to really change her career, right. So she came to me, obviously without a possibility to afford for this, so I gave her sponsorship. So she did the data science class, and now she's working at a computer company where she's now a data analyst, and she's in a very happy job where she doesn't have to look at those body parts anymore, right? When you think about a satisfactory role that you made someone's life stress free in some ways, so that is one example.

Another one I always tell everybody is that this is more of a motivation to many of my students that I tell is that there was a gal who was an English teacher for about 30 years in her career, in her life, and then she had kids and when the parents talked about their own kids, it's like, okay I want to make sure that my kids are in a well-reputed high-paying job such as a computer science job. But such a parent would have said, if I want to tell my kids to do that, I want to be a role model for it.

So she came to me and said, I just want to learn computer science, I want to know what it is about it. So she started with introduction to programming course for three months, and then she really got the hang of it. She went and built an ESL website that she can use it for her school students just to show the fact that whatever she learned she was able to apply it. And then for the next three months she came and learned how to face these technical interviews to go get a job. So she did that, and she got an opportunity to be an intern at Microsoft, and he did that amazingly. And finally, she's now a full-time engineer at Xbox as a software engineer. So you see it is possible.

And she had a really small baby, right, and when she was learning all this new stuff, she also had so many things going on in her life, yet she put 200 percent of her effort in. She would send me videos in the middle of the night practicing these problems on a whiteboard, and it went alright. So that is an example I use for all my students. It's a good motivation to say no matter what your situation is, if you have the desire, if you have the aspirations to do that it is possible and it doesn't take that much to do it.

COLLEEN O'BRIEN: And I imagine that the way that you structured Kal academy on the weekends makes that a little bit more accessible to people who during the week either have to work a job or don't have childcare until the weekend sort of thing.

KAL VISWANATHAN: It certainly helps.

COLLEEN O'BRIEN: You've mentioned the programming track as well as the data science classes, what are the other programs that you're teaching right now, and I know that those might change in a couple of weeks, depending on what's happening in the industry.

KAL VISWANATHAN: There's mainly three pillars I look at in my curriculum. One is the introduction to programming. That's fine for people with no technology knowledge. They're curious about these classes, so they come into these introduction to programming courses, and then there is data science, because that's an artificial intelligence is the next big thing, right. People always -- I mean look at Microsoft, they're investing so much in AI and every company is doing so. So hence, data science is a big popular track across the board.

And then there is one more, which is really about technical preparation, because one of the things that all these boot camps and colleges and universities lack is that they train you, or they teach you all the mathematics behind things. They teach you all the crazy calculus and what not you need to learn about in your life. They don't really teach you the thing that is in front of the employers. You're put in front of an interviewer and you have to do something, you have to show them that you're capable. And you have to do that in an hour's time, right.

None of the universities and none of the boot camps or courses online can do that for you, one of those difficult areas to really express that. So that is my technical preparation class where I teach my students algorithms and data structures from the very basic, like for anyone who has never done computer science. Like, what does all of this mean? And our interviews are one of the rarest interviews in computer science that you have to white board some problem and show that. This is how you solve this problem and write some code for it on a board, which I don't think any other field does that.

So given that this course teaches them how to express their thoughts and use their analytical skills and solve a problem in a white board and get more confident about that. So as part of the class I offer (inaudible) for my students, so people, from managers from Amazon to Microsoft come out and coach my student and get them prepared for it.

COLLEEN O'BRIEN: That is such great experience.

KAL VISWANATHAN: It is.

COLLEEN O'BRIEN: It sounds like a core principle behind how you've structured so much of the program is application not just the knowledge, but how it gets applied on the job and the interview, et cetera. And one more thing that I'd like to talk to you about is cost. So as I have sort of looked across the board at different coding camps costs can

become pretty prohibitive. And you've mentioned that you offer scholarships or sponsorships to some of your students. But how does cost come into play in your academy. How do you compare to the other organizations out there?

KAL VISWANATHAN: We are a nonprofit and given that my courses are only \$33 per class. So the reason why I structured it by classes I've had many times where students come and say I want to try out programming. So they'll probably come to my classes. They'll probably do two classes and say, okay, this is not my forte, I don't like this. And I heard about it, but now I really know that this is not mine. So all they have to end up paying is for those two classes, right.

So it's such a -- going back to the same thing. It's an ala carte service that if you want to try it out this is all it takes, so a matter of a couple of lunches I think. But if you want to continue it's a three-month period of time, it's 12 weekends, 12 weekends of one other class each and with homework during the week, right. And each of it is only \$35 dollars. So at the maximum you pay \$35 times 12, about less than \$500 for a course. And they're also not credited institutions. So you could get a certification if that matters to you.

But the idea is you get a wealth of knowledge that you don't get even by completing a complete boot camp and that's one of the things I've come to see, my students tell me about it and the way they could achieve the job or get a job today. So we have two options. One, depending on the criteria they'll give them a complete waiver of their fees so that they can go learn any coding course from my academy or a sponsorship as another way that for people who can come back and do a teaching assistant job back in my academy is that they can come and give their time to other students, once they get a job to show that this is how they attained it, so coach them. That's another way that we have encouraged children to do that.

COLLEEN O'BRIEN: That's such a great example of bringing mentorship back into the classroom. They've literally just gone through the same exact experience. That's fantastic.

Kal, you have a lot of teaching experience under your belt, as you mentioned, including work as a teaching assistant at Western Michigan University, which is part of the reason why you decided to continue your graduate studies here and a role as a distinguished faculty member at both Bellevue community college and University of Washington. What do you love most about teaching?

KAL VISWANATHAN: That's easy. I always love anything that's challenging in front of me, because that's what keeps me up to date, right. The best part of teaching that I love is to train someone who does not have the skill and train them to get to that skill. So teaching someone who is a chemist to show them what technology is, is the most

challenging part of training, compared to teaching someone who has already done computer science and teaching them advanced courses, right.

That's why my academy is not the focus of event, it's more about how do you get someone like a kid to know to do this thing that is a pattern which we do every day in and day out. That's the hardest part. That's what I love about it. And when I see someone go from being a chemist or a recruiter, or just somewhere else like a teacher, and now as a software engineer, if you released it back and say what it takes to train them, that's a huge challenge and you can do that in three months. That's what makes me proud.

COLLEEN O'BRIEN: I am proud to know you. It sounds like maybe your favorite kind of student is someone who you're opening their eyes to the magic that is technology. And it's so great to be able to make the industry more accessible to people who were doing completely different roles right now. So prior to funding Kal Academy you did some work within consulting which specializes in diverse talent recruiting and placement. Did that experience influence your decision to start Kal Academy at all? And what prompted you to dive into this problem of the lack of diversity in tech?

KAL VISWANATHAN: I mean, I'm a woman. I'm a diverse candidate in that perspective so that's probably part of my prompting here. So I work for Microsoft. This is my 19th year at Microsoft. And when I started my career obviously there was no buzzword about this diversity, right. So we never looked around and do I have women, we never talked about that. It was just normal at the point to be part of a room where you are surrounded by 20 male engineers and you're just probably one. Now when I reflect back it's like that's true. Okay, that's how we all grew up. But there's more opportunity for women now I look at that as, okay, we need -- rather than complaining that I don't have women in my group I really wanted to be part of the solution than be part of the problem. So that is why I took the step to say what can I do, one-by-one. It's a small feat, but at least I can do a small change in somebody else's life to be part of that high paying technology job.

And so that's where we started in consulting. It's a social company and we said how do we place those candidates when we started. But when we placed them we wanted to train them successful in their job. And that motivated us to split that up into Kal Academy which was really a nonprofit focus, just focus on training. So we can offer training to companies, as well, who is looking to grow diverse candidates, as well as individuals, which is what we do.

So In Consulting (ph) is still our biggest partner and they help us place these women into companies like IF networks, to Amazon to different places, so they are our conduit to companies besides Microsoft to get kind of a sense that, yes, they were a big part of getting it started.

COLLEEN O'BRIEN: It sounds like consulting is a critical component of this pipeline.

KAL VISWANATHAN: Exactly.

COLLEEN O'BRIEN: You're in the thick of this issue of homogeneity in the tech world and that pipeline that affects it. Are you hopeful about the future of diversity in tech, and what are the changes that need to be made to move the needle on inclusion more aggressively?

KAL VISWANATHAN: That's a tough question. I mean definitely I am confident, because if you look at the numbers from where we were 10 years ago, 15 years ago to now, yes, it is growing. Sometimes it's growing at a very smaller pace, but sometimes it's growing faster than we think. But I know for sure in probably 10 years down the road, or 15 years down the road, it's going to be completely different than what we see today. That's for sure, because we see more and more computer science, girls and women taking computer science courses than it used to be. So that's a good feat, right?

But I think there's a couple of things. To be very candid and open about this, which I am always about these matters, if I would think about it, what needs to also change is there are still parts of the industry out there that are very old-school. The people higher up in the chain, the management and things like that, they are still old-school. They think about the old ways of hiring, think about how they want to see their organization, how they want to see their structure. And that takes a long time to change, because when you look at those executives on the top, they're definitely people who have been in the industry for 20-plus years and what-not.

So hence, it takes a long time to make the perspective change a bit to understand the fact that, yes, you're going to spend a little bit more time on these candidates coming in that do not have the experience you think you wanted to be from a college right off the bat, but they can provide equally or greater value in a short period of time. It takes a while to make that change in their mind to understand that, and the more success we can show at this point in time is going to help with that inclusion at this time and in the future.

But that's what I find hard these days is that I could have these managers running around saying, yes, I want to hire these diverse candidates, these people, and I'm going to go look at every area in the industry and get people in, but it's not going to really happen until the whole management chain is willing to make that bet on that and willing to be very inclusive about the fact that we can look for something different than what we have been doing in the past. So that's a challenge these days, and that's why it's going to take a long time to do so. It's hard. It's not an easy problem.

COLLEEN O'BRIEN: Yeah, and I think it requires that everyone signs up to make diversity and inclusion a part of their job, like making that commitment to inclusive hiring or

sourcing diverse candidates. It requires that you're not only talking the talk but you're doing something about it as well.

KAL VISWANATHAN: And sometimes I've seen that you also do that, but when push comes to shove they end up going back to the old ways of doing things, which is what makes it harder. There's always going to be a time where things are critical that you have to hire the best in the industry, but that is the time you need to say, okay, I want to look for the future, I want to say, okay, where do I want to see this team in about one-year down the road, or six months down the road rather than saying I want something released now, so I'm going to go hire somebody. And that is what is happening, part of it, today, and that needs to change.

COLLEEN O'BRIEN: I know that companies like Etsy have been able to diversify their workforce by investing in coding boot camps, in code academies. Do you think that organizations like Kal Academy are really critical to the future of inclusive hiring?

KAL VISWANATHAN: I mean, I definitely think so because we have success stories to prove that fact that there are different modalities of how you train, get trained. That's the proof behind it. It's not the old-school way of going and getting a four-year degree programs, or two-year degree, or even getting a nine-month certification. It's not necessary because of the success stories, you can see that. These are people who have joined companies like Microsoft and Amazon and gone to become seniors and beyond. That's proof enough. So I definitely think so.

COLLEEN O'BRIEN: Kal, so much of your life is dedicated to making the world a better place. Where does this value system come from, and what has inspired you to live such a philanthropic life?

KAL VISWANATHAN: Most of it goes to my parents, right. When we grew up, this is true for many human beings today, but when we grew up, when we're struggling just like anybody else to put food on the table, but my parents kept instilling the fact in us that education is going to be the one that is going to help us throughout the world. At the end of the day, when you look at it, if you have good degree, you're going to get a better job than us struggling right now to put food on this table. So they kept that thing going in our heads, right, from our childhood.

And today when I look back, that's absolutely true, and that's exactly what I'm trying to do for others who are unable to do that in their life, and to ensure that, yes, you need to be educated., so that can be a better role model for others in the industry. And so they are my biggest motivators in my life.

And I've had great mentors in my life. He has been giving free education in hospitals and things in everybody's life in India, and he has been doing that. And he has been my role model since I was born. So given that, I've been surrounded with amazing people in

my life that have always done this as part of their whole life. They dedicated their life for it. So I'm glad that I'm part of that. And that's what's been in my blood, too.

COLLEEN O'BRIEN: Very early on I heard this phrase, education is the great equalizer. And I think that's what kept me working so hard in school, and it's so great that your philanthropy is extending that great equalizer to so many other people.

If our listeners are inspired by your work with Kal Academy, what are the best ways to support the organization?

KAL VISWANATHAN: There are many ways, but three common way that come out is for people wanting to help us out, they can either volunteer in academy, and if they're already in a job today and they're like am a manager today, I'm a lead today, I'm looking for people to hire, they can come and do mock interviews to help our students coach and be prepared at that.

Or they can come and hire our students, that would be my first thing if somebody wants to help us out. And if they are in a position to go hire diverse candidates, and if that is their motivation, then we are it. We can help them out. We have great profile of candidates waiting to be in a job.

And obviously the last one is if you're willing to give money, we are a nonprofit, we are a 501(c)(3) organization, so you can give us a grant, or you can provide us with donations.

COLLEEN O'BRIEN: And where can our listeners find you online to learn more or perhaps to make that donation?

KAL VISWANATHAN: Yeah, it is KalAcademy.com or KalAcademy.org, both works.

COLLEEN O'BRIEN: Excellent. Kal, thank you so much for making the time to come to the studio today.

KAL VISWANATHAN: Thank you, Colleen. It was fantastic.

COLLEEN O'BRIEN: I really appreciate the work that you're doing and, again, I feel really proud to know you.

KAL VISWANATHAN: Thank you. Likewise.

NARRATION: Cutting Edge, our take on stories in the business and technology world.

SONIA DARA: In this Cutting Edge segment, we're going to discuss a Fast Company article from earlier this month by Sean Captain entitled "CES slammed for not including any female keynote speakers this year." CES is the Consumer Electronics Show, and the

headline really hits the nail on the head. In fact, you have to go back to 2016 to see any women keynote speakers at the event. Both General Motors CEO Mary Barra and IBM CEO Ginny Rometty spoke that year.

COLLEEN O'BRIEN: Gender Avenger is a group that "ensures women are represented in the public dialogue," and back in November, they published an action alert on their site calling for CES to make it right in the five weeks leading up to the show by inviting women to deliver keynote presentations. Others also took note, including Twitter CMO Leslie Berland, who offered a long list of amazing women who could take the stage. She used the hashtag #changetheratio.

SONIA DARA: Karen Chupka, the Senior Vice President for CES and corporate business strategy at the Consumer Technology Association answered the internet's call with her own Tweet, "We go beyond the keynote stage & bring a diversity of speakers to all of our conference programming and we encourage you to check out our past CES lineups." Her tweet features photos of Ursula Burns, the chairwoman of VEON; Marissa Mayer, the former CEO of Yahoo!; and four other prominent businesswomen who have spoken at CES in the past.

COLLEEN O'BRIEN: While the response seems defensive, the Consumer Technology Association doubled back, and on January 5th, Gary Shapiro, the President and CEO of the organization, and Chupka penned a letter to Gina Glantz, the founder of that organization Gender Avenger. They stated that they are committed to changing the status quo, and "As we plan 2019 we will redouble our efforts to expand women's voices throughout the conference and as featured speakers."

SONIA DARA: While this isn't a success story just yet, there's definitely a lot to be learned here. First and foremost, diversity is not a checkbox. Representing a broad range of experiences in prominent speaking roles is an ongoing pursuit, and past keynote lineups cannot be pointed to as accomplishing inclusion.

COLLEEN O'BRIEN: Yeah, that's right. And you know, secondly, this story demonstrates the power of seeing something and saying something! If Gender Avenger and the Twitterverse hadn't called out CES so publicly, a lineup of men at a tech conference may not have prompted to many headlines. Feedback is important, and if you're not seeing the representation that you'd like to on panels or stages, let the organizers of those programs know. And even better, nominate the people you'd like to see in the spotlight. Because pointing out a problem is easy, but providing a solution is the stuff that gets you to the C-suite.

Well, Sonia, it's great to have you back from your business travels. I really enjoyed chatting about CES, and I loved hearing your conversation with Emily about Women Think Next. I'm already a newsletter subscriber of that community, and I can't wait to go to my first Women Think Next event this year.

SONIA DARA: Yeah, the conversation with Kal was really hopeful. As with many of our guests, I was astounded by her productivity levels, working full time and teaching on the weekend, and inspired to find more philanthropic opportunities in my life.

COLLEEN O'BRIEN: Yes, I agree 100 percent. Kal is the best! And, listeners, if you want more people to hear stories like Kal's please remember to rate, review, and subscribe to the show. Those actions help make us more discoverable on all of the podcasting platforms that you use. Dive into your podcast app, find the share button, and send this show to a friend you think might enjoy it!

SONIA DARA: And as always, you can find us on Apple Podcasts, Google Play, Spotify, YouTube, SoundCloud or wherever you listen to podcasts! And we recently launched our website, wibt.com. There isn't a ton of content there just yet, but it's a great place to direct referrals. All of the links to our show on different podcasting apps are aggregated right there. And as always, if you have any feedback or questions, please email us at WIBT@microsoft.com, or Tweet us @MicrosoftWomen.

COLLEEN O'BRIEN: Your mission for this episode, if you choose to accept it, is to subscribe to another podcast hosted by women! A few of my favorites include Call Your Girlfriend, a podcast on pop culture and politics hosted by Ann Friedman and Aminatou Sow; and So Money, a personal finance podcast hosted by Farnoosh Torabi. There isn't a universal search functionality you can use to find shows hosted by women, but if you do a quick internet search for "woman-hosted podcast" + whatever you're interested in, business, film, cooking, storytelling, etc., you'll be sure to find some good ones. Keep us posted on your favorites!

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