Ramona Schindelheim, WorkingNation editor-in-chief:

You're listening to Work in Progress, I'm Ramona Schindelheim, Editor-in-Chief of Working Nation. Work in Progress explores the rapidly changing workplace through conversations with innovators, educators and decision makers, people with solutions to today's workforce challenges. In early March, our Working Nation team was in Austin for the first in person, South by Southwest EDU conference since 2019. As part of the program, I sat down on the Cognizant Foundation Podcast stage with three remarkable young women, to discuss how they're forging a pathway into software development, a field that is still male dominated. Take a listen.

Kristen Titus, Cognizant Foundation exec. director:

I think we're ready. I like to see a packed room, thank you guys. And it's such a pleasure to see everyone here, thank you for coming. I'm Kristen Titus, I head up the Cognizant Foundation, and we are so pleased to have sponsored the podcast stage this week, and we're equally excited to have partnered with Ramona Schindelheim, who you'll hear from in a moment, from Working Nation. We at the Cognizant Foundation, work to prepare people of all ages for the jobs of today and tomorrow, and we've worked with Ramona and team at Working Nation to help tell the stories of those who've had transformative experiences, and excited to some of that with you today. With that, I'll hand over the mic to Ramona. Thank you and excited to hear each of your stories.

Ramona Schindelheim, WorkingNation editor-in-chief:

So as Kristen said, I'm Ramona Schindelheim, I'm the Editor-in-Chief of Working Nation, and Working Nation is a nonprofit news organization and we're totally focused on solutions to today's workforce issues. So we look at stories about the skills gap, how do we close it, how do we make sure people get the types of training they need, whether it's through college or other post-secondary career opportunities. But jobs are changing, so how do we make sure people change with them and they get those skills? We are here to talk about expanding opportunities in tech, and the idea is that not everybody has the same access to these opportunities. So how do we make sure people who are in underrepresented communities, people who are not represented in the tech workforce in general, have those opportunities. And thanks to Cognizant Foundation, we've found some really great programs over the last couple of years, and this is a great chance to highlight them.

Ramona Schindelheim, WorkingNation editor-in-chief:

So sitting next to me is Maria Contreras, she went through the Code2College program, and we'll hear a little bit more about her story in a moment, but she is a high school senior, she's 18 years old, and she already has a paid internship under her belt. Very impressive, indeed. And next here, Sage Lee, and Sage is 27, she just turned 27, and she went through the Turing School in Denver. And that is a seven month program, now all online, and taught her how to code and she had a paid apprenticeship, so we will talk about that. And then Kate Nichols, Kate is 32. Everybody gave me permission to use their age, by the way, I'm not calling them out. She's 32, and she started her career as a teacher and decided that was not going to get her what she needed, so she went to Ada Developers Academy in Seattle, totally upended her life, went there and went to train for a new career. And she is now working as a curriculum manager at Hello World software development. So say hello to the panel.

Ramona Schindelheim, WorkingNation editor-in-chief:

I'm going to start with Kate because Kate started her career as a teacher here in Austin, after you got a BA, right?

Kate Nichols, Hello World curriculum manager:
Yes, I did.

Ramona Schindelheim, WorkingNation editor-in-chief:
Were you a BA in teaching?

Kate Nichols, Hello World curriculum manager:
So I did a combination of studio art and education, here at UT Austin.

Ramona Schindelheim, WorkingNation editor-in-chief:
You went into teaching from that, correct?

Kate Nichols, Hello World curriculum manager:
I did. Mm-hmm (affirmative).

Ramona Schindelheim, WorkingNation editor-in-chief:
And how long did you teach?

Kate Nichols, Hello World curriculum manager:
I was in the classroom for six years.

Ramona Schindelheim, WorkingNation editor-in-chief:
And when we had a conversation earlier last week, you were saying something in particular in your personal life made it so that you said, "I can't achieve my financial goals." So talk a little bit about your teacher career and what made you decide to become a software programmer?

Kate Nichols, Hello World curriculum manager:
Sure. So I absolutely loved my time in the classroom, my time as an educator, walking away from that was maybe the most difficult decision I've ever made. But personally, there were things in my family with my own debt, where increasing living costs, where it was a bit of a concern looking ahead that would I be able to achieve the things I wanted to achieve on a teaching salary. And full disclosure.

Ramona Schindelheim, WorkingNation editor-in-chief:
Well, one of the things you said too, is that you were looking ahead and you said, "I want to be able to buy a house at one point." And unfortunately, and I'm sure we have plenty of educators here, those jobs don't necessarily pay well for a full-time salary, even working full-time. And then you decided you wanted to go learn software development. Why did you decide that? Why did you pick that career?

Kate Nichols, Hello World curriculum manager:
I had become fascinated by computing and software development over the years in the classroom, primarily because students would come to me and ask me questions, like, "What is the internet?" I would say, "A series of tubes. I don't know." And so I started to learn more so I could answer these questions, sponsoring coding clubs. That was my entry into the CS world. I found Ada Developers Academy just through Google searches.

Ramona Schindelheim, WorkingNation editor-in-chief:

So you did know how to use the internet?

Kate Nichols, Hello World curriculum manager:

I did, eventually I did. And then started, Ada's curriculum is fully open source, accessible to anyone, I started my journey there, learning Ruby. The reason I think I chose software development in particular, was because it would provide, I knew it would provide me with a powerful set of skills that I could leverage for a job that would allow me to achieve those financial goals that I have and have had, while also staying in education.

Ramona Schindelheim, WorkingNation editor-in-chief:

Yeah. And Ada, for people who don't know Ada Developers Academy, it's for women and gender diverse people, and it's totally tuition free in Seattle, which is an amazing thing, especially when you want to change your career.

Kate Nichols, Hello World curriculum manager:

Yeah, it's a phenomenal program. I highly recommend anyone who's interested, to look it up. It's rapidly expanding, when I attended, which was in 2019, it has since expanded to DC and Atlanta. It's a phenomenal organization. And I also had a paid internship at a big tech company in Seattle and they also provided me access to a very, very low interest micro loan that allowed for my partner and I to move to Seattle. It's not a cheap city, but that loan financed us to get up there and get started and relieved some pressure.

Ramona Schindelheim, WorkingNation editor-in-chief:

And we will talk about the paid internships after we go through here. But it was Zulily, right?

Kate Nichols, Hello World curriculum manager:

Yes.

Ramona Schindelheim, WorkingNation editor-in-chief:

Yeah. It was. Great. And Sage, now you got a BA in environmental policy in California.

Sage Lee, Handshake associate software engineer:

Yeah. So I got my BS actually, in environmental policy, in undergrad and sustainability was my passion, I would say it still is my passion. And I ended up moving to Denver to do environmental campaign work. I thought that I was going to fix all of our environmental problems through politics, and quickly learned that maybe that wasn't my thing because it's not what it's cracked up to be. And so I started jumping around, I had a lot of different jobs, all at sustainability or sustainable related companies that had sustainable missions. I was a cashier at Whole Foods, I worked in a warehouse at a sustainable packaging company. And then right before I made the switch to tech, I was working at, I was planning events for a tech company that had an environmental mission.

Ramona Schindelheim, WorkingNation editor-in-chief:

So you did not see that as a career pathway, I guess?

Sage Lee, Handshake associate software engineer:

No, I was floundering, for lack of a better term.

Ramona Schindelheim, WorkingNation editor-in-chief:

And how did you find ... now Turing, I think at the time you started, it was still in person, right?

Sage Lee, Handshake associate software engineer:

I applied thinking it was going to be in person, but I started in March 2020, so we all know how that went, so I ended up doing the program all virtually.

Ramona Schindelheim, WorkingNation editor-in-chief:

And it's a seven month intensive program and now it's all online.

Sage Lee, Handshake associate software engineer:

Yeah, it's all online.

Ramona Schindelheim, WorkingNation editor-in-chief:

And it's remained online, so it's not just in Denver.

Sage Lee, Handshake associate software engineer:

Yeah. Yeah. So you can join the program no matter where you are in the States.

Ramona Schindelheim, WorkingNation editor-in-chief:

And you did a paid internship term Handshake.

Sage Lee, Handshake associate software engineer:

Handshake. So I now work for a company called Handshake and I started my time with them as a apprentice software engineer.

Ramona Schindelheim, WorkingNation editor-in-chief:

Great. And I want to talk more in depth about what that apprenticeship program and experience is like. But Maria, I've already said you're 18 now, but you started your coding experience in an after school program, Code2College. How old were you when you did that?

Maria Contreras, high school senior:

I was a sophomore in high school, so 15. It was very random, I was just walking down the hallway to drink water one day and I saw this flyer that was like, "Join Code2College, learn how to code internship." I was like, "Nice, sounds cool." So one day after school, they set up a meeting and some Code2College volunteers came to the cafeteria and they talked to us about what this program was about. They said that twice a week after school, we would meet in a room and they would teach us how to code. And this could probably lead us to us getting some paid internships with these very nice and big tech companies, and I thought it was great. At that moment, I knew absolutely nothing about coding at all, I had just come from Venezuela, maybe six months ago, where my accent comes from, if you were curious.

Maria Contreras, high school senior:

And then I sign up for it, they said that it didn't matter that I didn't know anything about coding. Literally the only thing I knew was what I saw in the movies, of people hiding behind a computer, typing really fast. And it was like, "Yeah, I'm do that." So I went to the first class probably one week after that meeting, and it was great. They introduced us to Python, I think, was the first language we learned. And it was very simple, I think the first class we learned how to put shapes in a website or change the color or something. But I thought it was pretty cool because I saw myself manipulating a website by myself, it's something I never knew how to do. It was really great. I guess it provided me the opportunity to start something that I never thought I would be capable of doing.

Ramona Schindelheim, WorkingNation editor-in-chief:

Part of Code2College, which is based here in Austin, their whole mission is to expose people who may not have been exposed to this, whether it's an underrepresented group, women, low income, people who maybe don't see this career as for them, because they don't have the role models or they don't have the access to it. So for all of you, a question to you, did you find the program helped you get through maybe that hurdle? Because there's not a lot of women in software development still.

Maria Contreras, high school senior:

Yeah. I would say Code2College definitely helped me get into tech. I probably would have been involved somehow with technology, but not to the way that Code2College allow me to. I did the program sophomore year, the entire year, and then junior year, I did one more advanced program. By the end of my junior year, I was already doing this project, which I was creating a program of my own. I also did summer boot camp. So by the end of my junior year, I knew a lot of languages, I knew my way around coding. And then thanks to Code2College, I was given the opportunity to intern at Indeed. This is something that usually only college students can do, they do require some kind of college educations to get even the chance to do the interview.

Maria Contreras, high school senior:

So thanks to Code2College, I was able to get that interview. I of course studied really hard for it, did probably a thousand sample questions in a lot the different apps. And after, I think it was a three hour long coding interview, I was able to get that internship. And of course, since then, my knowledge of coding and programing grew exponentially, but I don't think that without Code2College, I would have had that opportunity, that chance to be so invested in tech. At this point, I am going to major, I'm going to do two majors in college and one of them is going to be computer science and it is mostly thanks to this program that I took that decision.

Ramona Schindelheim, WorkingNation editor-in-chief:

That's great. And Sage, we've talked before and you were talking to me about some of the support. So again, to that question of women in the industry, you had some mentorship opportunities when you were at Turing.

Sage Lee, Handshake associate software engineer:

Yeah, I did. I had a mentor that I met with the whole time I was there. And I will say I'm mixed, my mom is white, my dad is Black, I grew up with my white mom, in my white community, and I have always almost been the only Black person in the room, whether it comes to school or work or whatever. And as

a kid, especially in high school, computer science was nothing I ever even considered, because I had never seen a Black woman code on a computer. And especially as I grew as an adult, when I was looking to make a shift in my career, I was like, "Oh, I'm going to have to be an expert in math. I had to have studied it all through high school and through college, there's no way I could make that jump." I didn't know that there were opportunities like this, that existed.

Sage Lee, Handshake associate software engineer:

And when I started at Turing, I had a woman of color as my mentor, that I met with the whole time. I had a Black woman as my teacher for part of my schooling. I met with our Black identity group that we had as students at the school, and I was open up to this whole new world where there's people that look like me, that also code, which is fabulous. And I think that having that community definitely helped me ease me into the tech world.

Ramona Schindelheim, WorkingNation editor-in-chief:

And Kate, you specifically went to a program that was for women and gender diverse people. How did they help you get through those first steps of coding and then get to the apprenticeship?

Kate Nichols, Hello World curriculum manager:

Sure. So Ada provided tremendous support, there was also a tremendous amount of work on everyone's end to accomplish the goals of the program. But students, folks were provided with mentors, tutors, all, of course, free access. The community is so strong, there's such a strong network of Ada grads out in the world, that nearly 100% of the cohort, and in previous cohorts and cohorts since, immediately step into SDE1 roles, software engineer roles at major companies that Ada's partnered with, such as Google, Amazon, so many folks interned there. I took a slightly different pathway because all along the plan, due to family obligations here, all along I was intended to come right back to Texas. So towards when the program was wrapping up, I was able to start networking, and having the Ada name, the certificate, the internship company I was with, that did lend some legitimacy, I think, to me as an applicant, when I started to reach out to various ed tech companies and founders here in Texas.

Ramona Schindelheim, WorkingNation editor-in-chief:

So what was your apprenticeship like? I mean, you're walking into Zulily, and what did they have you do, work side by side with another software program, how did that work?

Kate Nichols, Hello World curriculum manager:

Sure. So I was fully a member of a software team there at Zulily, in their office, I was on a UI team. And previously, I'll also preface that everyone in Ada does interview with various companies, so these companies do select you, everyone is guaranteed an internship, but you can't necessarily pick. They're all-

Ramona Schindelheim, WorkingNation editor-in-chief:

Apprenticeship or?

Kate Nichols, Hello World curriculum manager:

Or I think you could call it both, it's an internship and an apprenticeship combined. But I was full time working there on the team, there was no differentiation between, "Oh, this is our-"

Ramona Schindelheim, WorkingNation editor-in-chief:

You got to jump right in.

Kate Nichols, Hello World curriculum manager:

Exactly. I jumped right in full-time. I worked on software that did supply chain management, I actually got flown out to some of the supply chain warehouses to look at the software being implemented and collaborate on ways that it could be improved. I was fully immersed for sure, and they were quite supportive.

Ramona Schindelheim, WorkingNation editor-in-chief:

And Sage, you went to Handshake where you ended up working, and did you have a similar experience?

Sage Lee, Handshake associate software engineer:

Yeah, I had a similar experience. At Turing, almost all of our learning is project based and we are building apps as we're learning in groups, similar to what you would experience in a job on a software team. And so when I was hired, that was an understanding that I knew the drill, that I knew how to work in an agile workflow, I knew how to work with my fellow software developers. And so similarly, I was put right in, I mean, there was an understanding that I was new to my career and that maybe I would need a little bit more mentorship, but other than that, I was doing the same work that my coworkers were doing.

Ramona Schindelheim, WorkingNation editor-in-chief:

It sounds, Ada and Turing, and I'm sure Code2College, partnered with some really good companies that had, it seems that they had that mission in mind, that they were not going to treat you just as someone to get coffee. And for you, Maria, I always take away from our conversation, previous conversation was you were in high school and tell us about when they'd ask you guys to tell everybody, your colleagues where you were from.

Maria Contreras, high school senior:

Oh, yeah, that was interesting. I was the only high schooler there. I think the youngest person after me was a college sophomore or junior, probably. So it was really interesting, everybody was super impressed. And I was feeling a little bit of imposter syndrome that I was there, they were coming from schools like UC Berkeley, UT Austin, Stanford, and I was coming from a high school in South Austin. So it was really interesting. However, it was very helpful. I don't think everybody treated me differently because of my difference in experience, along with my other interns, colleagues. I knew that I didn't have the experience they had, so what I did to catch up, I would work the nine hours or sorry, eight hours, from 9:00 AM to 5:00 PM. As soon as I like clocked out of work, I would do other programs like Code Academy, like YouTube tutorials. I looked on libraries and problems.

Maria Contreras, high school senior:

So after work, I would try to expand my knowledge as much as I could, so that I would be more prepared for the next day. And that really helped me because I was learning both inside my job, doing the projects I was assigned to do. I, as well as the other interns, we all were given a task to complete by the end of the summer, mine was tailored towards editing the interview platform that Indeed had. So basically the Indeed website, everybody is probably familiar that Indeed helps people get jobs. So right now or last summer, they were starting out an interview platform so that recruiters were able to interview

candidates on the Indeed websites. So that would eliminate the need for a third party user, like Zoom or other online calling platforms.

Maria Contreras, high school senior:

So my job was to change the UI of these interview platforms, so that it would be more efficient and it would suit better the needs of our recruiters, it would make the process easier. So I was doing a lot of research like AB tests, see what kind of change work better, what gave at least questions to the developers. And I just made the whole platform more efficient for the users.

Ramona Schindelheim, WorkingNation editor-in-chief:

Really sounds like, as you all have said, you just were thrown right in there. So where are you now? I mean, how many coding languages can you speak and are you still learning more, or speak, write, type, what's the correct language?

Kate Nichols, Hello World curriculum manager:

I think any of that works.

Ramona Schindelheim, WorkingNation editor-in-chief:

Thank you.

Kate Nichols, Hello World curriculum manager:

Yeah, totally. So now, so we moved back to Texas in January, 2020, when I graduated from the program. The next day, I started working for a company based here in Austin, called Hello World. It is a company that is developing a, has developed a SaaS platform to teach computer science through 12th grade. We also have in-school programs and partnerships in AISD here in Austin, and a lot of districts in New York, California, throughout Texas, and it's rapidly expanding. So I joined because I met the founder, found that we had, our I ideas and beliefs around education mirrored each other.

Kate Nichols, Hello World curriculum manager:

And so from there, we could just hit the ground running with redesigning the platform, building the curriculum up, and ensuring that we were building a product that was focused on equity. Teaching computer science is political and it does need to include learning about social justice, AI, things like that. So it's been an honor to develop this content, and today we've served about around 15,000 student and it's growing. And so I'm continually learning new programming languages because I'm overseeing the courses that are being developed, so my title's curriculum manager, so we have a team of folks who are writing the content and I'm supporting them, editing it, looking at projects in Rebel, looking at how the code's written, how clean it is.

Kate Nichols, Hello World curriculum manager:

And so it's been an incredible opportunity, I'm excited to see where we go next. This week, we just got endorsed by the College Board for our two AP courses that we spent the last, since the first week I started, I was like, "We have to build an AP curricula because a good one doesn't exist." Well, good ones do exist, I should say very good ones exist, but they're missing that piece of equity. Our platform's browser based and we're designing to students that us as teachers had in our classrooms. So I'm really

excited about that. That's been my greatest achievement, I guess, is that now we have this AP endorse curricula.

Ramona Schindelheim, WorkingNation editor-in-chief:

Great. And Sage, at Handshake, you are also working in education.

Sage Lee, Handshake associate software engineer:

Yeah, I am. So Handshake, for those of you that don't know, is a platform that helps higher education students connect with employers, apply for jobs, go to career fairs. And our mission really is to democratize the opportunity to jobs. So that way whether you don't have a network or you don't have the socioeconomic background that would provide you with a lot of the tools we have in our toolbox to get a job, you have access to employers and you have access to jobs that you're qualified for. So I really love working at Handshake just because it's a mission driven company, but you asked where we are now from where we were at our programs. And so I was a backend engineer, when I went through Touring, there's two programs, a backend and a front end, and so I learned Ruby on Rails, the language and framework that I started with.

Sage Lee, Handshake associate software engineer:

But I think something that's really important that the program does for us, is teach you how to be a learner. You don't just learn the one language that you learn, you learn that getting into tech, you're going to be a lifelong learner, you're going to have to keep developing your skills over time. So when I did my apprenticeship at Handshake, I went in knowing that most of my skills were on the backend side of things, but now I'm what you would consider full stack. So I do both backend and front end work, and I'm still learning every day. But I'm now an associate software engineer for them, I did my apprenticeship for six months and was evaluated and they hired me on full time.

Ramona Schindelheim, WorkingNation editor-in-chief:

Yes, we can applaud both of you, all of you. And I want to point out too, Kate, you have achieved that financial dream of yours. You did by a house, right?

Kate Nichols, Hello World curriculum manager:

I did. It's a miracle.

Ramona Schindelheim, WorkingNation editor-in-chief:

And you told me, I think your salary doubled, right?

Kate Nichols, Hello World curriculum manager:

Yes. Correct.

Ramona Schindelheim, WorkingNation editor-in-chief:

And Sage, you say you're not shy about saying how much money you made before you went in.

Sage Lee, Handshake associate software engineer:

Yeah, I'm not shy anymore, let me tell you.

Ramona Schindelheim, WorkingNation editor-in-chief:

Shout it out.

Sage Lee, Handshake associate software engineer:

Yeah. So I was making 40 K what I was doing before, and taking the risk to take seven months off of school, maybe longer, to find a job and pay for the tuition, was a little bit scary for me. But I paid 20 K for my tuition at Turing, but six months later I got a job that offered me 90 K. So I think it was worth it.

Ramona Schindelheim, WorkingNation editor-in-chief:

Good return on your investment.

Sage Lee, Handshake associate software engineer:

Yes.

Ramona Schindelheim, WorkingNation editor-in-chief:

And Maria, you're not there yet, but you just got a full ride to Rice.

Maria Contreras, high school senior:

I did.

Ramona Schindelheim, WorkingNation editor-in-chief:

And do you think your internship played a role in that?

Maria Contreras, high school senior:

Yeah, I definitely think so. I don't think they get a lot of applicants that get a software developer internship as a junior in high school. But I'm very involved with my school as well, and I think those two combined, really helped me stand out in the application process and I'm very excited about it. I'm going to major in bioengineering, which also involves a lot of coding, and computer science, when I get there, possibly consider a minor, but I don't know if that's possible.

Ramona Schindelheim, WorkingNation editor-in-chief:

If we've learned anything, is Maria's an underachiever. We're never going to see her again, this is it. I do want to take a moment before we say goodbye, if anybody has any questions, we have a mic, we are happy to bring it over. Kyle, the lovely Kyle, is happy to bring it over to you.

Audience Member:

Thanks. I'm a director of curriculum and learning and I'm building a team and I want my team to be diverse and female and proportional to the representation of the world. And so how do I write job descriptions that attract diverse and female candidates?

Kate Nichols, Hello World curriculum manager:

Maybe I could speak to that, as a fellow curriculum person. I would say definitely emphasize front and center, what you just expressed, that willingness and openness, and not just that you're willing and open to hiring diverse candidates, but it's a priority, and just stating that, I think, goes a long way. I

would also encourage you to look for folks who may not have a conventional or a four year degree or whatever, presumably it's ed tech related. Okay. So looking, scouting out programs like Ada, like High Spot for those graduates. And I don't know if y'all have any other suggestions?

Ramona Schindelheim, WorkingNation editor-in-chief:

That's a good for point though, and a lot of tech companies are dropping that four year requirement, and it can be a barrier because we've talked about it at Working Nation, that there are AI programs out there that the first thing they ask you, "Do you have a four year degree?" And if you don't, you don't go onto the next round. So looking for people with that diverse training is a very important answer, I think.

Sage Lee, Handshake associate software engineer:

Yeah.And also, I want to underscore what was already said, that being transparent, because I think there's a lot of companies and initiatives out there that are trying to diversify right now and there's improvement to be made everywhere. And as long as you're transparent about what your goals are, and not that you just want to diversify, but why and what are you doing besides hiring me to make that happen? And I think also for me as a candidate, it's one thing if you're hiring entry level folks to positions at your company that diversify your demographics, but if I go on LinkedIn and I see that there's higher level folks that are also diversifying your employee pool, that's really putting your money where your mouth is, in my opinion. Because going into a company, I want to be able to have a mentor, I want to have a sponsor higher up at the levels of the company, that I can relate to in that way. So that's what I would say.

Ramona Schindelheim, WorkingNation editor-in-chief:

To that point too, just to say, one of the criticisms in the DEI, let's hire minority, let's hire underrepresented, is not making that pathway within the company for that retention. So to see people who have gone on from that entry level job, would be an important message.

Sage Lee, Handshake associate software engineer:

Absolutely.

Ramona Schindelheim, WorkingNation editor-in-chief:

Yeah. Did you have any thoughts?

Maria Contreras, high school senior:

I haven't really been looking out-

Ramona Schindelheim, WorkingNation editor-in-chief:

You're not looking for work yet? Okay.

Maria Contreras, high school senior:

Not yet. In a few years.

Ramona Schindelheim, WorkingNation editor-in-chief:

You got four more years.

Maria Contreras, high school senior:

Yeah. But I do agree with both of those points, seeing people that already work at the company, that possible candidates can relate to, would really help them be less intimidated, more empowered and willing to go through that process because it makes them realize that it is possible.

Audience Member:

First of all, love this panel. I was someone who was very intimidated by programming, taught myself some programming because I felt FOMO that everyone's doing it, and that was the most transformative experience I've had in my life. So currently I'm an MBA student at MIT, trying to figure out how do I teach soft skills for technology. I'm curious about your experiences about how you have developed that, especially at a bootcamp, especially at a non-traditional way of learning programming. I'm trying to figure out how do we help high level ICs transition into that manager role and support them in their growth in becoming leaders in the technology space, and not just someone who just programs and completes Jira tickets.

Sage Lee, Handshake associate software engineer:

My answer would be, I think I'm in an interesting place because I did a program where most of the students I was working with were coming from non-traditional backgrounds. They were coming other sectors where maybe they had time to develop those kinds of skills that you're talking about. But I would say the most important thing for me coming out of my program, when I had a tenuous time working with my team while I was building something or meeting new people or an anything like that, is remembering that everybody is a different type of learner and everybody is a different type of worker. And what might be really easy for you to pick up reading in a book or documentation on a website, somebody else might need to see visually and somebody else might need some more time to digest it. And making sure that there are those spaces and those pathways for all the people that you're working with, I think is definitely something important to think about when you're thinking about soft skills.

Kate Nichols, Hello World curriculum manager:

So I think my first thought with that would be to just really, to not discount the person's past experience and really digging deep for what soft skills they've already been using and leveraging in their own work or lives previously or concurrently as they're studying software. I think once tech realizes how amazing scrum masters are, teachers are as scrum leaders, like it's over. So recognizing that all learning is valid and purposeful, even if it doesn't come with a certificate or recognition. And then apart from that, fostering relationships with mentors, facilitating connections with mentors for folks to have mentors who look like them, who come from backgrounds like them, is invaluable. And what I've witnessed in the Ada network is that folks who develop these mentorships, they're able to rise through the ranks a little bit more quickly, because I think that they're fostering those soft skills at an accelerated rate.

Maria Contreras, high school senior:

Yeah, I think my only input would be to expand on Sage [inaudible 00:36:58], it's important to give them different ways for them to learn. Like right now there's a thousand different ways in which you can learn how to code, and given just different options for different types of learners, it's what worked for me. For example, for me, it doesn't work very well just by reading library or the terms of a programming language, for me works better are to see people actually implementing the theory behind it, if that makes sense.

Becky:

Hi, my name is Becky, I'm from IDO design company, and I lead a portfolio focused on expanding access to learning and work. We heard a little bit about taking the leap to do this program, and I'm curious what helped push you over the edge or make that decision to just go for it and also stick with it when it was hard?

Ramona Schindelheim, WorkingNation editor-in-chief:

Go ahead, Kate.

Kate Nichols, Hello World curriculum manager:

Getting accepted into Ada is what did it for me, just I was really, really scared to even a apply, and I knew about the program for several years before I even did apply, because of imposter syndrome. And so just making that jump, I was able to do so because I had the support of my partner and friends and community, and that's also the only way I got through the program, or not the only way, but foundational, that support. So I think that's crucial for anyone making that jump, and if they don't happen to have that support, if there's some way that the organization who wants those kind of folks to apply, if they can build in resources to provide that support for applicants.

Kate Nichols, Hello World curriculum manager:

And that's something Ada's really pushed for, now there's, for example, for camps they have, they'll offer childcare for folks to come and learn, to dip their toes in. They'll offer, like I was saying, mentors with folks who look like them and come from backgrounds like them, and they give the applicants some choice over who that person may be. And also having access and creating open source environments in tech, that more people can access, is crucial.

Maria Contreras, high school senior:

Yeah, I just wanted to expand on that point. For me, it was crucial to have a mentor, it's something that Code2College is really good about, just having someone to support you, even when you don't have any idea of what's going on. The volunteers at Code2College were able to stay with you even after their time, was to help you really understand, answer any questions that you may have, and they also taught you what it would be like to have a career in tech. So I guess it is really important to have that personal connection from someone that has already gone through what you went through, to really help you, push you and make that decision to stick in the tech industry, even when it's male dominated or mostly white people. So just having a person, it's what really helped me.

Sage Lee, Handshake associate software engineer:

Yeah. And I'll say before I made the switch, I was in a position that I was really frustrated by, and I think that all of my mental potential on my daily task was not being utilized. I was frustrated because I knew I could do more than what I was doing, and I had built up this energy that I was so willing, I was so determined, I was ready to do something maybe a little bit more technical. And I just remember thinking, "If only somebody would just show me, if somebody would just put me in the position and teach me on the job, I could do it. I know I could do it." And I was working at a tech company at the time and all of the people who were doing the technical work were white men, none of them looked like me. And I thought making that jump would be something that I would have to sacrifice a lot for. And I

actually ended up running into a friend that was a cashier with me at Whole Foods, and he was a software engineer.

Sage Lee, Handshake associate software engineer:

And I was like, "We were just checking out people's pineapples, how did you get from point A to point B in such a short amount of time? We were just there. And he was like, "Oh, I did this bootcamp." So similar to what the other girls were saying, knowing somebody who finished and got there was what made me take the initial jump because I knew that person and had trusted that person. And then while I was doing the program, Turing does a really good job at continually making sure that we're connecting with alumni, whether that's meeting with them on panels or mentor sessions, or I did mock interview sessions with a lot of alumni and seeing people successfully get through the program gave me the juice that I needed to push through, because I knew that it was possible. And I was also seeing people that had similar backgrounds to me, who had no experience in computer science, had no experience in coding, and I realized that it was something that I could do too.

Ramona Schindelheim, WorkingNation editor-in-chief:

I think we have another question here.

Kyle:

Two right here.

Joshua Elder:

Hi everyone. My name is Joshua Elder, I'm with, at the Siegel Family Endowment. And so similar to the question about risk, we do a lot of funding on programs similar to this workforce development. But I'm interested specifically, Sage, you talked about making 40 K, made the investment of 20 K, now doubled your salary. What made you take that risk of the financial burden and this investment, knowing that it would pay off? And what advice do you have for programs and funders to help reduce the risk of cost? Because that's oftentimes a barrier to access to these types of programs.

Sage Lee, Handshake associate software engineer:

Yeah. So I'll say initially for me, I was working in a position where there was nowhere to go, there was no higher up, other than being a manager, and there was no career opportunity in the position that I was in. So I knew there wasn't really going up from where I was, and I really wanted to find a new field where I knew there was some sort of ladder to climb, there was opportunity for me to grow in whatever field I chose next, and I knew that there was a possibility for that in tech.

Sage Lee, Handshake associate software engineer:

And I will say obviously taking that risk, 20 K, it's a big chunk of change, and I took out loans for the amount, a lot of the students at Turing take out loans, I know the school has recently been accredited, so there's even more financial aid that's available for students. And in all honesty, I took the risk because the numbers don't lie, and a majority of the people who go through the program, get a job after a month and they're making a livable salary, not even livable salaries, but high salaries. And so for me, it was worth the risk because I knew that I could get help with financial aid, and I knew myself and I was going to get a job after, that was my goal. So I don't know if that really answers your question, but that was my experience.

Maria Contreras, high school senior:

This is just something I stumbled upon scrolling through social media one day, I found there are some programs in which you can get trained to be a software developer and you don't pay your tuition until you get a job. I don't know how true or ...

Ramona Schindelheim, WorkingNation editor-in-chief:

Those exist [crosstalk 00:45:31] agreements

Maria Contreras, high school senior:

But I think that's something that would make taking the risk very way easier. If there's nothing to lose, I feel people would be willing or more eager to make that jump.

Ramona Schindelheim, WorkingNation editor-in-chief:

I think we have one more question before we wrap up. Yeah.

Audience Member:

Yes, thank you. So I'm with the Hispanic Federation, so we focus most on low income Latino families across the country, trying to get them into the tech sector. We're new to building out this program, so I'm curious, do you have any sort of credentials or certifications, each of you?

Ramona Schindelheim, WorkingNation editor-in-chief:

Does your program come with a credential.

Audience Member:

Right. Industry specific certificates.

Sage Lee, Handshake associate software engineer:

I believe I did get a certificate when I finished.

Ramona Schindelheim, WorkingNation editor-in-chief:

Matt is over here, he's shaking his head, yes.

Sage Lee, Handshake associate software engineer:

Yes, yes. I got a certificate, but honestly my ambiguous answer comes from the fact that I wasn't hired because I had a certificate, I was hired because when I did the technical interview, I could do the work, and I-

Ramona Schindelheim, WorkingNation editor-in-chief:

And you had the apprenticeship, and so people saw that you could do the work.

Sage Lee, Handshake associate software engineer:

Yeah. Yeah. So the piece of paper and the title that I got after finishing the program, wasn't what put the nail in the coffin, it was the fact that I could show my work.

Kate Nichols, Hello World curriculum manager:

Yeah. Just to echo that, I did receive a certificate from Ada, but just what you were saying, having the technical interview skills was crucial. During my lunch breaks when I was working for Zulily, I would practice white boarding with a group and whiteboarding for technical interviews. And it was me being like, "What is recursion?" And also senior engineers who were like, "Oh, I forgot all this stuff because you don't really use it day to day." And we were all in that together. And so just having white boarding skills, technical skills, giving folks access to websites like Lead Code, Hacker Code, so they can start practicing those kinds of problems, is going to put them leaps and bounds ahead, I think even of some four year CS grads, from anecdotally, just what I've heard. So giving them access to books, resources and online memberships, so they can practice those problems and just nail them.

Maria Contreras, high school senior:

Personally, I didn't even have a high school diploma when I got my internship. So I only had 150 Lead Code questions that I memorized and I knew how to solve. So I could answer very fast and efficiently, every single question I was asked in my technical interview. So I don't really think you need that anymore to be successful in tech at this point.

Ramona Schindelheim, WorkingNation editor-in-chief:

And before we go, I want to point out Matt Casimir, who's the Turing School founder, and Matt Stevenson, Code2College, they're both here too. So I thank you very much for coming in and also training these wonderful people. So the other thing I want to say before we go, is Maria, as we keep pointing out, she's a senior in high school and she asked me to give her something and I have right here, she needed this. She had to take the day off from school, so this is an excuse for her absence, that says, "Maria Contreras was unable to attend class today because she was speaking at South by Southwest EDU." So here it is, if they have any questions, come back to me.

Maria Contreras, high school senior:

Thank you.

Ramona Schindelheim, WorkingNation editor-in-chief:

Okay. I do want to thank you all, Maria, Sage, Kate and everybody at Cognizant Foundation for having us here to do the Work in Progress podcast. It'll be out in a couple of weeks, look for us wherever you get your podcasts, at workingnation.org. So thank you very much.

Maria Contreras, high school senior:

Thank you so much.

Ramona Schindelheim, WorkingNation editor-in-chief:

This episode of Work in Progress was recorded live at the South by Southwest EDU conference in Austin. I'm Ramona Schindelheim, Editor-in-Chief of Working Nation.