EPISODE 925

[INTRODUCTION]

[00:00:00] JM: The ability to create software is a superpower, but software education is not evenly distributed. Ryan Carson started Treehouse to provide a high-quality education system for anyone to learn how to build software. On a previous episode, Ryan and I discussed the field of programming education. Ryan returns to the show for a conversation about building

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[INTERVIEW]

[00:03:14] JM: Ryan Carson, welcome back to Software Engineering Daily.

[00:03:16] RC: It's good to be here. Thank you.

[00:03:18] JM: It has been four years. How has the market for learning to program changed in that time?

[00:03:25] RC: Completely. Oh gosh! Four years is an eternity. It's also the length of a college degree, which is kind of ironic. It shows you how that doesn't work. Gosh! It has fundamentally changed. I mean, we're seeing the rise of apprenticeships. I think that's the big thing that's going on right now. I think education companies like Treehouse and others are realizing, "We can talk about teaching people all we want, but the reality is people need jobs."

So we're seeing the rise of apprenticeships happen. We're seeing a lot of the kind of low quality sketchy boot camps go out of business. We're seeing some of the larger companies get snapped up and bought. We're thankful, we got acquired recently, plural sites from China by a bunch of people. So you're seeing that consolidation of the market.

[00:04:16] JM: WeWork acquired somebody too, right?

[00:04:17] RC: Yeah. WeWork acquired MissionU, which is actually a friend of mine. Adam runs that, which was kind of the new model of college where you don't pay and then you learn something specific. Then once you get a job, then you pay it back. So the whole income share agreement. They got bought by WeWork.

[00:04:32] JM: What do you think of those, the income sharing agreements?

[00:04:35] RC: It's interesting. I think they're a step in the right direction, because I think about college and the way I did it. It was either your parents could pay for it or you paid for it with student debt, and there's no job guarantee at all. So that's bad. So I think ISAs are a move in the right direction, which is nice. I think the problem with them, and this is the major problem I have with boot camps period, is that the whole reason I started Treehouse was to try to empower people to get access to jobs, right?

So the problem was, is that I grew up with a computer. Fell in love with that. My 11th grade teacher said, "Hey, Ryan. You know you should study computer programming," and I was literally like, "I do not know what programming is." She said, "Well, it's where you tell a computer what to do and it does." I thought, "That sounds fun. Let's do that." Of course then I went and studied computer science, right?

So I had all of these things that had to be true in order for me to become a computer science graduate, right? I had to grow up in a home where I was safe, where I was well fed, where there is a computer, where somebody said to me, "Hey, you should learn programming." Then I could afford college. All those things had to be true.

Then I walk into my first interview. I actually moved to England for fun, and I've walked into an interview in Cambridge England and I got the interview because of my computer science degree. It's a requirement. We're going through the interview, it's going fine, and then I said, "Well, what are we going to code and what are we going to do here?" They said, "We're going to write ColdFusion." I said, "I do not what that is. I learned C++." They said, "Oh! Don't worry about it. Read a book."

I just thought, "What is going on? This whole system is broken."

[00:06:24] JM: You got thrown out of the interview?

[00:06:25] RC: No. Then I got the job.

[00:06:27] JM: So they hired you and then gave you the ColFusion book.

[00:06:30] RC: Yeah. This is irony. This is the sick truth about the world actually. What determines whether you get jobs is not really what you know. It's if you have access or not, right? So at that point I realized, "Okay. My computer science degree got me this interview, and then the ability to program any language job me the job." But I think the reason why I have a computer science degrees is because I'm privileged. I'm a white male with total privilege, right? So it's like this system is not fair.

This is not the way America is supposed to work, where actually you get a job because you have privilege. You should get a job because you work hard, right? I think that was the moment I decided to start Treehouse. I just thought, "This system is totally brokenness. I would like to see if I can change it."

So fast-forward to 2016, we've taught hundreds of thousands of people how to code on Treehouse. It appears that it's working. We've essentially synthesized a computer science degree down to its essence to get you a job. We had products that were 25 bucks a month, or $200 a month. We launched what I think is the world's best online boot camp. It's called the Tech Degree. It's 200 bucks a month. It's everything you need out of boot camp, but online. We had been doing all that. Then I had to look at the tech industry and ask myself the brutal question, "Is anything changing?" and the answer is no. The wealth is still concentrated. Power is still concentrated among people to look like me. Nothing has changed, right? So I guess I had to ask myself a brutal question. Is what we're doing working? The answer is not really. I'm proud of the people we've served, and I'm thankful for that, but is the system changing? The answer is no. It's not.

So at that point I was like, "Well, we need to rethink this. We have to go deeper." I basically got educated around systems of racism and sexism in America and what they've done and how they work and how you have to go deeper if you want to start to unwind those things to actually create access for everybody."

So I read books like *The New Jim Crow*. Watched 13th on Netflix. Listened to Seeing White, which is a great podcast. I just kind of learned, "Oh! If you don't have access, you can't get in." It doesn't matter how hard you work. If no one tells you that you could code for a living and there's no one around you that can do that and you can get education to do it, you're never going to get in. There's no door.

So what we did is really simple. We went to the Boys & Girls Clubs. It was down the road, and I met this amazing woman named Colleen and I said, "See if we can partner. You have amazing high-potential talent graduating from the Boys & Girls Clubs, right? You know who they are. Most of them are black or Latinx or women. Why don't we unlock scholarships to our tech degree and then we'll wrap it with extra mentorship and support and 21st-century life skills and

we'll make sure everybody has a broadband and laptop and then I'll go find employers to hire people as apprentices?"

This was 2016, '17, and it wasn't supposed to be a business or a product or anything. It was just I want to do something about it. So Colleen and I were just donating all of our time and, literally, I was doing mentorship calls at 6AM and then visiting people at nights and calling employers during lunch. I mean, it was just pure, "Let's see if there's something that can be done," to actually create equal opportunity.

Because the America that we all believe in that we want to exist is that there is the American dream. You can work hard. You can build wealth for your family. But the reality is that's not true for everybody. So how do you create equal access? So we've built this primitive version of an apprenticeship program. It was free for the students. The employers funded all of it. So we ended up getting Nike and Envision, Treehouse to hire out the program. It was small. It was five apprentices. Those people got placed at Nike and Envision and Treehouse and it worked, and I think at that moment, I thought, "Whoa! This works. Wait a minute. This is the education system of the future. Everybody in that tech is trying to build the future of education, and this is it." It's funded by employers. So it's free to students. There's no student debt. There's a guaranteed job at the end. Its hyper-local, so we literally hired people from your neighborhood. It's diverse. It looks like America.

I just thought, "I wonder if we can scale this. In order to scale this we have to get employers to fully fund it. They can't be volunteer work. So I need to go find an employer and ask if they'll write a big check to run this program." So I use my access. I know a lot of VPs, SVPs, CEOs, CTOs and I called them and said – One of the first guys I called was, again, Eric Muntz at MailChimp. He was the VP of engineering in Atlanta. I basically was on the phone with him and I remember I was pacing in a conference room on a cellphone and I said, "Eric, I think we've built a system that works. I think it scales. I think it's diverse. It's local. It creates software engineers. It's amazing, but you just have to try it. Just try it."

I said, "But it's free. You got to write us a check so we can actually run this program for you." The phone went silent and I was like, "Hello?" He waited a couple of seconds and then he said, "Let's do it. Let's go." So MailChimp in Atlanta was our very first official apprenticeship program.

[00:12:18] JM: The model is brand-new to coding. I enter into Treehouse. I pay $25 a month.

[00:12:26] RC: No. Nothing. It's totally free.

[00:12:28] JM: So the whole school is free.

[00:12:29] RC: Yeah, it's literally free and there's no ISA. There's no income share agreement. So the way it works is simple. You have companies that are losing the talent war. It's brutal. There's not enough talent Period. There's definitely not enough talent that looks like America that's black, Latinx, women, LGBTQ. There's not enough talent. Period. Google and Facebook and Amazon are just buying it all.

So every other companies left with no options. I mean, they're going to lose, which means they're going to go out of business someday. So we say to them, "We have an answer. You can actually hire infinite numbers of software engineers. There actually is no lack of talent. It comes from literally your neighborhood, because there's a Boys & Girls Clubs in every neighborhood, every city, and you pay for the whole program, and then what they do is as they quit their job and then they get paid to learn for three months."

So you actually get paid to learn. It goes a step further, right? Because this is the other problem with boot camps, and it's kind of laughable if you think about it. Everyone's like, "This is so great. Anyone can go to a boot camp. Well, anyone who cannot get paid for three months." Who can do that? I mean, you already have to be privileged and wealthy to even think about doing that. Most people have to hold on a day job, and if they can't do that, they can't go to school.

[00:13:50] JM: Do the income – Like Lambda school. Do they give you loans or anything?

[00:13:54] RC: Lambda school is free, right? It's all based on –

[00:13:56] JM: But do they also give you living loan or something?

[00:13:58] RC: No. This is the problem. I mean, it's great. I'm not knocking Lambda or any other school like that, because they do serve people. They do do good. But the problem is you have to be like up three rungs of the ladder to even take advantage of it. The communities that we serve, they often work at the Amazon Fulfillment Center, or they work as nannies, or they work in retail. I mean, they can't quit that job to go to a school full-time, because they have kids and they have a life.

So what we do is we actually ask the employer to pay them a living wage hourly to go through our tech degree. So they get paid to learn. Then we see a high-percentage of those people complete that program. That's a three-month program. Then they get onboarded as apprentices at the company. Then the company then pays on that living wage hourly and they start to become software engineers at that company.

[00:14:55] JM: When do you make money? Do you make money at the conversion from apprentice to full-time?

[00:14:59] RC: No. We say to the company, "Pay us to run this whole program." Because, see, the problem is, is that companies –

[00:15:07] JM: No contingency. It's just they paid to run the program, but the price of the engineers don't really get marked up at all.

[00:15:16] RC: No.

[00:15:16] JM: I mean, it's basically a subscription fee from their point of view.

[00:15:19] RC: It is, but the beautiful thing is we typically create groups of 5 to 10 apprentices at a time.

[00:15:25] JM: That's cool.

[00:15:27] RC: it's very much in our interest that we have to be able to deliver high-potential amazing people, right? Otherwise, MailChimp doesn't want to work with us again, right? But the

beauty is, is – I'm just going to be blunt about a lot of like ethnicity stuff on this show today and gender stuff. Imagine, what if you were the only man at a company and you got put in and they were like, "Good luck. I hope it works out." How would that feel?

[00:15:54] JM: Well, okay. I mean, I can imagine a context in which it would feel not great.

[00:15:56] RC: Right. But as men, as men, we never – I mean, that never happens to us.

[00:16:01] JM: It certainly never happens to us.

[00:16:02] RC: Right? The reality is, if you were the only woman that was brought into a program like this, you may love your job. You may love the increase in wealth. But you probably won't stay, because it's going to suck.

[00:16:15] JM: For sure.

[00:16:15] RC: Right? So the idea is let's create groups of people so they can support each other and not feel like they're alone. That's thing number one. But thing number two is, in our program, we continue to support them after they convert from apprentice to full-time for three years. Because the problem is nothing matters if people don't stay in these jobs. It's literally worthless, right? So if you get a job as a software engineer but you don't stay because you're the only woman or the only black person or the only person who's gay or lesbian or trans or queer, you're just – You're going to leave.

[00:16:54] JM: Does remote alleviate that, by the way?

[00:16:56] RC: No, because culture is everywhere. I mean, the culture of a company lives on Slack. It lives on email. It lives on Zoom calls, right? So it may help, but it may also harm. I mean, you could feel more isolated at home. So the jury is out on that. We've actually found remote absolutely doesn't work for apprentices, because they feel so isolated.

To finish the model, that's pretty simple. A company says, "We need to hire software engineers. We need them to be looking like America to be from diverse –"

[00:17:27] JM: And it needs to be in-person.

[00:17:28] RC: "And it needs to be in-person and has to come from our community here in Atlanta, Boston, New York, wherever." They say, "Please run this program for us." This is a problem. Everybody wants a diverse workforce. Everybody wants to hire software engineers, but nobody has the muscle memory of how to run true apprenticeship programs.

So MailChimp said yes, and then Verizon said yes, and Hubspot said yes, and Adobe said yes, and Niantic, and ezCater, and Toast. Basically, we have focused the entire company now in apprenticeship. We are still offering our tech degree online, which is great. It empowers people. It's a wonderful program, and it is the backbone of our apprenticeship program.

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[INTERVIEW CONTINUED]

[00:19:49] JM: So it sounds really cool and it sounds legitimately useful and like a legitimately good business model. I think the timing is particularly good, because online content has gotten extremely good. I mean, I started Software Engineering Daily four years ago, and since then I think there have been hundreds of more software engineering podcasts have come out.

[00:20:10] RC: Oh, yeah. It's just proliferate. I mean, teaching how to code is hard, but it's not a moat to protect your company, right? We're really good at it just to be clear. So one of tech degree, one of our most popular ones has an MPS of 73. I mean, it's off the charts good, but that's still not good enough. You have to give people jobs. You have to make sure they stay in those jobs. You have to provide what we call 21st-century workplace skills. How do you use Slack effectively? How do you do Agile? How do you act as an effective worker in a modern workplace? These are actually really important and actually really hard to teach.

[00:20:51] JM: What's useful about those luckily don't get stale as quickly as something like React. React lessons. Four years ago, the React lesson plan is like, "Oh, well [inaudible 00:21:02]."

[00:21:03] RC: I mean, it's every 18 months if you're lucky.

[00:21:05] JM: Every 18 months.

[00:21:07] RC: Yeah, and that's actually a long time.

[00:21:08] JM: Your curriculum rotates every 18 months.

[00:21:10] RC: Yeah. So it is hard to teach people how to code, but that's actually not the secret sauce. The secret sauce is finding employers and creating talent for them. I think that's just the key. So that's the big thing we're doing. We've really focused on this over the last two years. Yes, about the last four years, what has happened? It's interesting, because I have an extremely long term timeline.

So a lot of my fellow founders out there have sold their companies. So you look at Code School. You look at Thinkful. You look at a tone of them. They're slowly selling their companies or going out of business, because it's really hard.

[00:21:55] JM: Linda.com.

[00:21:56] RC: Yeah. Yeah, Linda I guess got bought by LinkedIn.

[00:21:59] JM: That's a pretty heft acquisition.

[00:21:59] RC: Yeah. But the point is I think that creating an education company that truly transforms generational wealth and empowers people is extremely hard and it's not something you do in three years. It's not even something you do in 10 years. It takes a quarter of a century minimum.

I think we're just prepared to do the work for decades. I raised money very early on and we didn't raise much. So my wife and I control the board and the company, and we really have –

[00:22:32] JM: I was actually going to ask you about this, because even your series B was like pretty small.

[00:22:37] RC: And it was a long time ago.

[00:22:37] JM: Right. Long time ago.

[00:22:38] RC: I mean, it was 7 million bucks and it was like 2013, which is 6 years ago.

[00:22:42] JM: Well, it's interesting because there are these companies that because they have – So the norm at least in the news of Silicon Valley is you're a money-losing company for a long, long time and your rounds get successively bigger and bigger and bigger, but some companies develop a business model that makes the money.

[00:23:05] RC: Shockingly!

[00:23:06] JM: Shockingly. So I was going to pull up a tweet from Aron Levy this morning, and it made me laugh. He said – I'll try to summarize it, because I won't be able to find it quickly. He basically said, "Let me summarize everything I have ever learned about how to build a good company." He said, "Number one, get profitable. Number two, build a product that people actually want to pay you for. Number three –" I mean, it's everything that you don't hear about in Silicon Valley, "Oh! Don't optimize for private valuations."

Basically what he's saying is all of these stuff you hear is actually BS that's coming from investors, because what we see often in through the VC kind of engine is that it's a form of a Ponzi scheme. Really, what it is is it's about putting money, raising the apparent valuation of a company so that then you can sell it to the next investor.

[00:24:00] JM: Yeah, uniformly. In many cases, yes.

[00:24:02] RC: Yeah, most of the time. I mean, there's some great investors out there doing good stuff and there are some companies that, yes, they need funding. I mean, you look at like a Beyond Meat. I mean, you're making literally meat from plants. That's something that you got to raise a lot of money for.

[00:24:17] JM: I mean, even arguably Uber. I mean if you don't do that, somebody else is.

[00:24:21] RC: Yeah, but Uber is an outlier. I mean, I think that's a problem we look at these companies and say, "This is how we all should run our company. This is what we should all aspire for." The reality is they're complete outliers.

[00:24:33] JM: Well, but there's gradations, like Slack. Okay. Microsoft is coming out with teams, right? They're in that position. Even imagining Slack as a company that if they would have – I mean, well, even Slack in its earliest days. They were game, right? They said, "Okay. We're going to have a huge upfront cost."

[00:24:48] RC: Game never ending. Yep.

[00:24:50] JM: Yeah, game never ending. So there're gradations, right?

[00:24:52] RC: There is. I think the problem is people are distracted and they forgot about what this is all about, which is solving a problem you care about. Whether that's a big problem or a small problem, it shouldn't matter. It shouldn't matter to you. What we're told is every problem has to be a big problem. That's the only problems that matter.

The truth is there's a lot of amazing founders out there who are passionate about problems that aren't going to be billion-dollar companies. They shouldn't raise any money.

[00:25:17] JM: Hey, you're looking at one.

[00:25:19] RC: Right, and that's great. Honestly, I think that's healthy and good. So we need more of that. We also need – I was talking about this on Instagram this morning just saying, "I'm kind of tired of the crushing at winning culture thing on social that we all feel that we all have to promote, that I'm a part of. Why can't we just all be honest about what's happening," which is if we're doing something that's worth doing, there are big ups and big downs, and we should be honest about that." Because if you don't, you end up going sort of crazy.

So that's kind of a journey I've been through. I've bit on a hook that was the Silicon Valley venture hook and said, "Hey, everyone should be building a billion-dollar company." Then realized, "Oh! Education is actually a much longer-term thing. It's much harder than I thought." I was able to save my company, because I didn't raise much money and I control it and I was able to ratchet down the costs and think long-term and build profit.

[00:26:24] JM: How do you that, by the way? How do you do that while raising money? How do you maintain autonomy while raising money?

[00:26:28] RC: Just raise the absolute minimum amount. That's the key.

[00:26:31] JM: But is there some inflection point where you lose that control and you can no longer – Just to be clear. So you're in a situation where you personally can still have a big

outcome and feel like a successful business person much deserved while you've also been able to raise money.

[00:26:49] RC: Yeah, which is a little weird. I mean, I guess what we did is raise money, a little money early, and then stopped raising and forced our self to figure out how to get net cash flow positive.

[00:27:02] JM: What kind of terms do you have to give up in those?

[00:27:05] RC: You know what's interesting? I think the truth is, is that you can maintain control over your company if you just try to build a profitable company. I mean, in the end, all companies need to be profitable, right? So I think the goal is actually solve a problem you care about and figure out how to be sustainable.

[00:27:23] JM: Okay. But then at this point, like do you have to go to your investors and say, "Look, I'm going to give you dividends," or, "Look, this is the cost of not owning that much of my company," or "Look, I'm going to refund you," or "Look, I'm going to give you 2X."

[00:27:35] RC: I've said, "Listen," to them, "this is where we're going. I will do my best to deliver a return for you."

[00:27:42] JM: Okay.

[00:27:43] RC: Because I I'm a moral person. So the idea as well, let me keep working hard and then maybe we'll swap you out with other investors. So we'll basically do a secondary. But the truth is a lot of venture capitalists write you off if not legally, emotionally and at some point and they realize, "This may or may not be a 10X return for me."

[00:28:08] JM: Right. You offer to write your business off.

[00:28:10] RC: Both.

[00:28:10] JM: Really?

[00:28:11] RC: This is why I said the way venture works, it's designed to optimize for the one Uber. It's not designed to be optimized for the nine other businesses.

[00:28:21] JM: I get that, but like the investors themselves, I mean, can't they be realistic and sympathetic?

[00:28:27] RC: Yeah, but they only have so much time. So I do have sympathetic wonderful investors. Bridget Lau is on my board. She's from Social Capital. She's a wonderful person. But she only has so many minutes in a day. So she can't care equally about me than she does for another investment that's going to make her a lot more money.

[00:28:45] JM: But does she have resentment when you say, "Look, it didn't end up being the market that I interpreted."

[00:28:50] RC: No. Yeah, they'll get it. I mean, they realize – What's interesting is I just want to create a large impact on people's lives. That's actually why I started Treehouse. So I'm not trying to optimize for financial gain. I'm more interested in leaving the world in a better place when I found it. So I think that's why they're so much focus that you hear about me talking about equity and diversity and inclusion. If I could play a part in actually making America more like what we want it to be, which is equal opportunity does exist and you can work hard and build wealth for your family. If I could be a part of that, then I would be the happiest person on the world.

The truth is I am happy every day now because I am working on that every day. I mean, there's a lot of life lessons that I've gone through this, and I think the most important thing I want people to hear is that you have to kind of dig down deep and figure out what it is that you really care about. It's so easy to get distracted and care about what everybody else wants you to care about, whether that's, "I want to be able to raise big grounds, or I want to be thought of as a very successful CEO. I want people to write books about me." I mean, all those things, right? You end up going, "Actually, I don't know if any of that matters."

So if you think backwards in your life, say you're about to die and you think, "What do I actually want to have been true about my life?" Then you start to filter for what really matters, and I've just realized, "You know what? I want to be in love my wife. I want to be a good dad, and I want to truly serve people and open up opportunity for them." That's really what matters to me. I think we can build a good business doing that. You can build a sustainable business that way as well. You just have to focus on it and try to ignore all the noise, and there's just so much noise.

Ultimately, that's what's led us to this idea of creating a movement around what we're doing. The idea is we figured out how to do apprenticeships. It scaled massively. So we started with five apprentices at two companies, and now we're placing 110 apprentices in nine cities across America. What we decided to do is, "You know? Let's go big. Let's see if we could possibly begin to change the system in America."

So what we did is we partnered up with the Boys & Girls Clubs and an amazing nonprofit called AnitaB.org.

[00:31:24] JM: Just real quick. This does seem like something that could potentially have a massive financial outcome.

[00:31:30] RC: Yeah. I mean, it could, but that's not the point. I mean, I think every company in America in 10 years is going to be using apprenticeship, not colleges.

[00:31:42] JM: Totally.

[00:31:42] RC: Right? So, yes, it could. I mean, we could be the company that literally creates the way –

[00:31:48] JM: I don't even know if you need to be the company. I mean, this is one of those things like –

[00:31:52] RC: You mean a company.

[00:31:53] JM: Well, yeah. It's like this is one of those things where there's – If you take a step back and you look at the technology we have available and you look at the current system we have, it looks ridiculous.

[00:32:03] RC: It is. It is ridiculous.

[00:32:05] JM: Its horse-drawn carriages.

[00:32:07] RC: Yeah. It's almost laughable. I mean, companies actually spend on average $3 million more than they need to for a group of five software engineers if they hire from the traditional path. If they would just apprenticeship –

[00:32:22] JM: I believe that.

[00:32:24] RC: Yeah, I mean it's shocking and I think everyone will look back. It's just like – It's like smoking. I mean, everybody smoked, and then everyone – Then we realized it's killing everybody. The current talent pipeline is killing America and its driving us to trillions of dollars of student debt. It's literally cancer.

So I think what we're saying is, "Wait a minute. There is a sustainable, local, diverse talent pipeline. It's right here, and the phrase is overused, but it's true. The future is here. It's just not evenly distributed. So we're seeing the future of the town pipeline right now, that Mailchimp, HubSpot, ezCaterasy, Verizon like it's the future. It's better.
So I think you're right. I mean, I think we're going to build something really big, and I'm excited about that.

[00:33:12] JM: There's other things you can layer on top of that. I mean, just like you might not have been able to anticipate when you started Treehouse. This can be leveraged in doing apprenticeship platform.

[00:33:21] RC: I never thought of that.

[00:33:22] JM: Everything cool that you can build that has economies of scale, there are other platforms you can build on top of that, and they become higher and higher margin.

[00:33:32] RC: So it – I mean, we're going to end up building the largest alumni network in America. That's going to be great. There's going to be a lot of power to that. We will have loyalty from our alumni that makes loyalty to your college look like a joke.

[00:33:49] JM: Right.

[00:33:49] RC: Right?

[00:33:50] JM: Well, see. This is another thing that we're totally in our infancy of is reputation systems online, because you have Facebook, which is awesome. You have LinkedIn, which is like kind of good in that sense like the reputation. But like there's still not a great way to really dislike just like broadcast to the world your reputation. I try to hire people on Fiverr and I still make mistakes. They have tons of five-star reviews. This should be the most direct reputation system, but here's another nuanced reputation system that you're building, an alumni network.

[00:33:50] RC: It's going to be fun, and the beautiful thing is we really care about our apprentices being successful in converting into full-time employees, because that's why we serve them. We really care that they blossom into amazing software engineers, because that helps our customers, the companies. Then they want to hire more talent through us. So it's properly incentivized, right?

[00:34:52] JM: How do you price it?

[00:34:53] RC: Profitably. I mean, this is the thing is it has to be sustainable. Otherwise, it doesn't work. So we figured out a price point that is affordable to companies that they'll say yes to but also is sustainably profitable for us.

[00:35:08] JM: How operationally intensive is it?

[00:35:09] RC: It's intense. I mean, this is the thing. Everybody wanted this magic TechEd thing.

[00:35:17] JM: They're like, "It's a spreadsheet."

[00:35:18] RC: Yeah. I mean, in that you would magically learn online and like transform your whole life. It's like the – Life doesn't work like that. It's too messy. People are too messy or they're too complex or too wonderful to be turned into SaaS software. So I think what we found is we were – Everything is luck. It really is like timing and luck. We were lucky that we built one of the world's best online education systems. We've been working on this for a decade now. We have an extremely high MPS. All that helps. We basically have the best possible online education system in the world, but you still have to work.

[00:35:59] JM: Have you ironed out the operational like difficulties of that do you feel like?

[00:36:04] RC: Yeah. So that's really straightforward, and we're really good at creating online education. That's not easy. We have studios. We have studios.

[00:36:11] JM: You mean like we got video.

[00:36:13] RC: We have full-time employees. So the tech degree is our online boot camp, and it's 10, 12 projects that are punctuated throughout our curriculum. Those projects are graded. Their slack channels where you have support from real people. It's school. I mean, I think everybody tried to abstract the school from online education that it's almost like the matrix where you would just be infused with knowledge, and your life would change. That's not real.

[00:36:44] JM: Wait. Can I just say again? Okay. The fact that you have like a studio, you have all this good infrastructure that you've built. This to me seriously seems like such a good use of venture capital. The fact that you compare that to like a debt financing. Just from a straight-up financial perspective, that's a pretty good use of venture capital.

I mean, just economically from your perspective, thinking of it strategically and this is speaking very much selfishly. Not that I'm thinking of raising venture capital, but the premise of like – Because I've had some conversations recently with people about kind of the NDVC model, which can mean different things. But just the idea that there is theoretically gradations between

the Uber type of venture capital and straight-up debt. There's a lot of gradations there. Thinking of venture capital as, "Look, the entrepreneur has the freedom to remain independent while raising venture capital." That, to me, seems like an appealing premise.

[00:37:53] RC: Yeah, it is. You know what's interesting though? All these comes down to it's a sales job. It turns out that raising money or doing anything in life is a sales process, right? So in the end, you're going to end up having meetings with people and what you're selling has to be compelling. So you really can't automate it. You can't really generalize around it.

I just read the book Super Pumped, which is Travis Kalanick.

[00:38:21] JM: Man, I had to stop reading that. It's so cynical.

[00:38:25] RC: Well, yeah. But what I found out, what I thought was interesting about is reading the parts around how Travis raised money and how he's really good at it.

[00:38:32] JM: Okay. I'll have to keep reading it.

[00:38:34] RC: Raising money is a sales process and it you just have to be really good at what you think of Mike Isaacs's tirade against Lake Silicon Valley I think is right so I think he's right about a lot of it a lot of them there's a lot of basically generalizes the worst behavior Huber to being the average of the Silicon Valley startup culture

[00:38:54] RC: Yeah. There're a lot of things that are broken in Silicon Valley. There're some things that are right. But I'm not really trying to focus on all that. The things that I'm trying to focus on are how do you get people access to wealth?

[00:39:10] JM: Read better audiobooks.

[00:39:11] RC: Yeah, and better audiobooks. There you go. I guess the idea is if we can create access for more people, America is better rate, right? Period. You get the GDP – I read a report by McKinsey about the racial wealth gap, and it's fascinating, because basically it looks like

America is leaving over $1 trillion in GDP on the table by perpetuating the wealth gap. It's not good for anybody that there is an equal access to opportunity, right? It's really not good.

I think that there is a future that is possible where there is actually equal opportunity. It doesn't mean there's equality, right? There's a big difference in the quality and equity. So equity means everybody starts at the same starting line. Then you're going to run heart, right? But you got to get everybody the same starting line, otherwise there isn't an equal opportunity.

[00:40:08] JM: What's the smallest company that you've been able to win over with the apprenticeship model, or do you like ratchet down and up to price based on –

[00:40:16] RC: No. It's the same price. You know what's interesting is it's 5 to 10 apprentices. That's our typical model. Verizon looks like they may be –

[00:40:24] JM: So you make a guarantee?

[00:40:26] RC: No, it's not a guarantee. I mean, the idea is we're going to put a certain number of people in front of you and you just have to agree to hire them as apprentices. You do not have to convert them, because that's not a realistic scenario where you say, "I'm going to give you somebody and they're going to be perfect and then you have to hire them, right? The world doesn't work like that.

[00:40:52] JM: People even get fired from apprenticeships.

[00:40:54] RC: Yeah. I mean, stuff happens.

[00:40:57] JM: That's pretty rare.

[00:40:58] RC: Life happens. People, maybe their parent dies or they have to move. I mean, there's a lot of things that can go that can change in people's lives that cause people not to convert to full-time. They have nothing do a performance. But the idea is a company says, "Hey, we want to hire 5 to 10 apprentices," and we say, "Great. here's the price and let's go." We were

on the whole program from beginning to end and then we continue to support them for three years, and it works.

So far we have 100% conversion from apprentice to FDE. It's bonkers. We were planning on a lot less.

[00:41:32] JM: What's the sample size?

[00:41:33] RC: So far, 20 converted apprentices.

[00:41:37] JM: Really?

[00:41:37] RC: Yeah.

[00:41:38] JM: 100% 20 – Wow!

[00:41:40] RC: So it's going really well. I mean, and it's going to normalize. It will probably reduce to maybe 80% conversion.

[00:41:45] JM: Right. You've probably been super selective about it.

[00:41:48] RC: No. We're not being selective. That's absolutely what we're not doing. I mean, there is a mix.

[00:41:54] JM: Does random people make it? Okay. Well, I guess there are people who apply. So you have self-selection.

[00:41:57] RC: Yeah, there are people who apply. I mean, then what we do is we ask them to complete 20 hours of curriculum on Treehouse, which also selects for people's desire to be software engineers. You can't complete that if you don't enjoy a software engineering programming. Then we do do interviews. But we're not doing this culture crap or any of that kind of stuff. It's more about do you have grit? Are you creative and do you like solving problems? It

turns out there are a lot of people in America like that. They're not just people coming out of MIT and Stanford. It turns out that there's amazing talent coming out of the Boys & Girls Clubs.

So one thing I wanted to make sure do in the podcast is tell everybody about a big movement that we're launching. So you'll probably hear this after the fact, but tomorrow, we are launching a movement called projectunlocktheamericandream.org, and what we're doing as we're partnering with a nonprofit. So the idea is AnitaB.org runs to Grace Hopper Celebration, which is the world's largest gathering of women technologists. 26,000 women are going to be at the conference in Orlando and they have this network of amazing women across the country. A lot of them are women of color. So we're partnering with them and with the Boys & Girls Clubs to source talent.

So we're going to be sourcing talent from the AnitaB community and the Boys & Girls Clubs across the nation. Then we're going to empower 100,000 Americans to become software engineers over the next 10 years.

What's bonkers about the program is the impact it has on people's lives. So already we're seeing with the communities we're serving that their median income goes from 21K to 62K. So we're seeing a tripling of people's incomes of less than 12 months. Before the program, only one out of three had access to healthcare. Now, we're seeing 100% have access to healthcare, because it's provided by the employer.

So we're serving families where they can't take their kids to the doctor in America, and now they can. It's a complete game changer and it's what – It's easy to forget how important that is when you're a person like me. I've always had healthcare and it's always been provided by my employer, my parents.

[00:44:17] JM: No. It's life-changing.

[00:44:18] RC: Yeah. So that's bonkers. Then the really cool part is the generational wealth piece. So it turns out to have access in America, you have to have generational wealth. It's kind of how you get access. So the way you build generational wealth is you have to be able to save into something like a 401 (k). You had to be able to do that.

So we train our apprentices as soon as they convert to contribute at least 6% into their 401 (k). If you model that out really conservatively, so a 6% contribution on a 62K salary, so you never get a raise. Worst case scenario. Say you don't get an employer match, worst case scenario. Say you get a kind of subpar return. It's like a reasonable return on your investment.

You're going to go from the median net worth of black and Latinx families in America. We're talking net worth, not salary, in America is $18,000. We're taking those families from $18,000 net worth to a very likely $3 million value of that 401(k) by the end of their life at age 79. I mean, that will literally change America, because then people will actually have wealth they can pass on to their kids. So their kids don't have to start three laps behind, and then they can get a mortgage, and then they can – It's just –

[00:45:40] JM: Then you can start offering 401(k) at your next business model.

[00:45:43] RC: Right. There you go. We probably will do that. I mean, I'm just so excited that this is possible.

[00:45:50] JM: Totally. It's mind blowing.

[00:45:52] RC: Yeah. It's pretty neat as well. Another cool thing I've realized –

[00:45:54] JM: By the way it's not even very hard to learn to be programmer. This is the crazy thing.

[00:45:58] RC: No. It's straightforward. Yeah, it isn't rocket science. It's solving puzzles and being creative.

[00:46:06] JM: I just want to ask you about this here. Do you think the low code stuff has legs in the business –

[00:46:11] RC: What is that? I don't know about that, low code?

[00:46:13] JM: You haven't heard of low code or no code?

[00:46:13] RC: No. Tell me about that.

[00:46:15] JM: This is the advantage of not living in Silicon Valley by the way. So you haven't seen like Airtable, or Webflow?

[00:46:22] RC: Oh, sure. Yeah.

[00:46:23] JM: Or like wix. – So these things are getting really good.

[00:46:25] RC: Yeah, true. I know you can mix Zapier or Zapier with Airtable and all of a sudden you're like, "Maybe I don't need a developer." Yes, but it's kind of like – It's simplifying reality, which is we kind of said that about cars that they were going to be flying by now and that we're going to – Jetpacks. I mean, yes, Zapier and Airtable is great, and that's going to be wonderful. But it doesn't abstract to a human who need to solve problems.

So absolutely the way we solve problems is going to change, but it's not going to abstract away humans anytime soon. I think people who code are really people who solve problems. That's all we're doing, is we're creating people who solve problems. The tooling is going to get better and better. I mean, it's like when David Heinemeier Hansson introduce Rails, we just thought the whole world is going to change.

[00:47:17] JM: Totally. Well, it did.

[00:47:18] RC: It did, but where are we now?

[00:47:22] JM: Oh man! I think that totally increased the market of the total market of development.

[00:47:25] RC: It did, but does it mean developers went away or like they didn't code –

[00:47:30] JM: No. But that's now what I'm saying. That's not what I'm saying. I'm saying will it change your curriculum in the sense that like if that's a lower hanging fruit, like maybe instead of starting people with whatever, create React app or Sketch, or I don't know where you start with, but like low code seems like a pretty cool place to start. If you plateau there, that's still a great – You could be a low code operational person at a company.

[00:47:53] RC: Totally. No. You're right. Actually what's interesting is we're kind of going that direction where it turns out that business analysts who are pre-data scientists are extremely in demand, and basically they're using tools like Altrix and Airtable. I mean, and you're right.

So that's absolutely where we're going to end up going, I think is creating an army of people who can solve problems for corporate America and spilled wealth in the process. It's going to be really fun. We're already spinning up partnerships like that like. We partner with Adobe to create a UX curriculum, because it's like, "Oh, we don't need to just create [inaudible 00:48:29]."

[00:48:29] JM: What does a partnership mean?

[00:48:31] RC: Partnership means we go them and say, "Hey! You're a market leader. We would like to create people that can do X-skill. Part of the curriculum is going to be your tooling. So why don't you pay us to help us build that curriculum?"

[00:48:45] JM: That's great.

[00:48:45] RC: It works.

[00:48:46] JM: You are a good salesman.

[00:48:47] RC: Yeah, it works. It's great. Everybody wins. Also, we can attach it towards we're going to literally empower people that are black and Latinx and LGBTQ and women to create wealth for their families for the first time.

[00:49:00] JM: You should go talk to Webflow [inaudible 00:49:01]series A.

[00:49:03] RC: Well, there we go. Let's do it. Webflow, if you're listening, give me a call. Yeah, I am optimistic about the future. I think actually if we go back to our roots and say the American dream is a real thing and it can happen. It's beautiful, because I talk to Republicans and I talk to Democrats and I talk to people in the middle and everybody believes in the American dream. Everybody wants it to happen.

[00:49:28] JM: I think technology can do a lot of it, because the thing is we're at this point right now where everybody can operate Instagram intelligently. There's a very savvy Instagram users who don't think they can learn to code. Maybe they can't learn to code in the current paradigm or maybe they're blocked from learning to code in the current paradigm, but the difficulty of learning to be a savvy Instagram user is like if you can –

[00:49:56] RC: That's pretty hard.

[00:49:56] JM: It's pretty hard. It's technically difficult.

[00:49:59] RC: Yeah. So people are getting the hung up on, well, coding, and it's like, "No. All coding is is using tools to solve problems." That's what you're saying. Instagram as a tool to solve a problem. If you can learn that, you can learn all sorts of stuff. So it's like we're dumbing down everybody and saying, "You can't. You're not capable of doing that." It's like, "Wait a minute." Now, most people are hard-working and intelligent. They just don't have the opportunity. One of the things people are going to see is that we're rebranding our logo to a ladder.

So right now it's a frog hand. We're going to rebrand to a ladder, because we want to build jobs. We want to build the ladder to jobs and tech. It's like people just need a ladder. If there is a ladder, then they'll run-up it. We've been pulling up the ladder on people for years saying, "Oh, you didn't go to the right school." "Oh, you don't look like me, and therefore for you don't get the ladder." That's like, "No, it's not the way America is supposed to work. You should be able to look like whatever you look like and be whatever gender you want to be and still get access. That's what we all deeply want to happen."

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[INTERVIEW CONTINUED]

[00:53:05] JM: Take me inside the technical process of building this apprenticeship system and what are the technical risks, the execution risks of this shift and focus that you've made.

[00:53:23] RC: Well, the risk is that a lot of it is human. I mean, a lot of online education is kind of funny because you're abstracting away the actual person from the process, and people are very complex. I mean, do you even know your own mind about why you do things? Why you quit? Why you don't quit? No, neither do I. I mean, literally I was put on Instagram this morning, I was frustrated because I'm trying not to eat a bunch of carbs and I'm trying not to drink during

the week, and last night I had a Manhattan and a Coors Light and ate an ice cream sandwich. Why did I do that? I woke up and I was like, "Damn it!"

So we don't even know our own minds and how they work. So kind of presuming that we're going to put online education in front of people and it's magically going to create opportunity is kind of hilariously naïve. So there's that.

So the complexity, the risk, is you're dealing with real people actually and their real lives. It's gotten way more real like. I now no longer have the luxury of kind of abstracting away humans and what goes wrong with education anymore. When an apprentice goes through our program and they start not succeeding, that's a real person that we know. They have real kids. They have real experiences and you just can't pretend to abstract it away.

So I think what I'm talking about is all the stuff that happens to people. You have psychology. You have decades of training people how to think and how to feel, and you have systematic racism and sexism in America that operates every day. You have all these real things that you can't change quickly for people. So that's the hard part about what we do, but it's also the magic, "Oh my gosh!"

We have stories, one of our first apprentices, his name was Hector, and he is Latino and we met him and he started going through the program and he worked at Amazon Fulfillment Center. I remember him just lighting up and loving, learning these tools and how to solve problems and how to control computers. Then what happened, and I never would've predicted this, is that his parents said, "Wait a minute. Are you thinking about not going back to college?

If this happens and you get placed at this company, are you going to drop out of college?" He was like, "Yeah, because I'm getting to paid a ton of money and I'm doing something I love at a company where I have healthcare." His parents had been trained to believe that the path to success was the college degree.

[00:56:19] JM: Hey, speaking of misperceptions. Don't you think the FBA, the Amazon Fulfillment Centers, I think those are totally misperceived. I think people perceive those as sweatshops, but they're actually like these pretty solid bases to begin working with.

[00:56:34] RC: Yeah. I don't know a lot of details. All I know, Hector was working hard and he got paid hourly. He wasn't, as far as I can tell, mistreated or anything. But he had to work a lot to make a living wage. I mean, I don't want to say his salary on-air, but –

[00:56:48] JM: You earn more than Starbucks though.

[00:56:50] RC: Well, maybe. It depends on time of year.

[00:56:54] JM: Sure. It probably depends on your manager. It depends on a lot.

[00:56:57] RC: But the point is he was not making very much money. I mean, like barely livable, right? Then he gets converted and works at Nike now and he is making something like two – He's making 5X his current income. What's beautiful though is like, "Hey, guess what? I can help my parents turn electricity back on now."

I mean, he just gives all the money back to his parents. His parents have worked extremely hard to support him, but they don't have access to building wealth. I remember asking him every day, "How happy are you? Can you rate your happiness on a scale of 1 to 10? 10 is the happiest you've ever been. One is you feel like you're going to die." He kept saying 9.5, and I was like, "You don't have say that." He said, "I've never been this happy." He's like, "You don't understandably. I get paid to create things."

[00:57:52] JM: I see this all the time.

[00:57:53] RC: It's just – He's like, "I'm in a room with people that are nice to me and believe in me and want me to win. I don't have to work obscene hours anymore, and I just work normal hours. There's this food here." I mean, he's just like – I'm like, "That's what we do every day at Treehouse. That's why I get up to come to work every day is for stories like that, and it's an honor to be able to do it.

[00:58:15] JM: Okay. Last question. What's the biggest mistake you've made in the business?

[00:58:18] RC: Oh! I'm only allowed to list one. Gosh! I mean, there are so many mistakes. There are so many mistakes. You know the biggest one, is not realizing as a CEO I need to be a salesman or a salesperson. Wow! I thought, "Oh! I'm the founder CEO. I really understand product, and I want to solve this problem. I just thought sales was this dirty thing that other people do. I just learned the hard way. Actually, your whole life is selling, and if you don't feel comfortable selling, you're going to hurt your company. You're going to hurt yourself.

So if you're listening to this, please learn how to sell. It's not that hard actually. You just have to talk to people about something. Talked to enough of them and then one of them will come out at the bottom, right? It's a skill you can learn. So, yeah, sales. Now, honestly I love sales now. It's fun. Most the time it's fun. Sometimes it really sucks when you get noes. You get lots of noes. I've gotten several noes last couple of weeks.

[00:59:25] JM: It's a good humility calibrator.

[00:59:26] RC: Oh my God! Yeah, I mean, 8 out of 10 people are going to say no to you. So my chief of staff said something helpful. He's like, "You know, did you know that Babe Ruth struck out the most times out of anybody?" Babe Ruth is a famous baseball player, if you don't know. I was like, "Wow! I never thought about that. I mean, he hit the most homeruns, but I didn't think about he struck out the most."

I do think there's some amazing truth in that. So now when I strike out I'm like, "Cool! It's just another at-bat,' and I hate sports by the way and hate sports analogies, but I think it's relevant.

[01:00:02] JM: Ryan, thanks for coming back on. Great talking to you.

[01:00:04] RC: It was really fun. I'm a plug myself and say go to instagram.com/ryanCarson or twitter.com/ryancarson. I love to talk to you. Thanks.

[END OF INTERVIEW]

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