

# How My Company Created an Apprenticeship Program to Help Diversify Tech

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Despite recent efforts to increase diversity in tech, the hiring and retention rates of underrepresented groups in the industry remain abysmal. Even Facebook, with billions in cash, has only been able to increase their number of women employees [from 31% to 36%](#) over the last five years.

At Treehouse, an online school that helps companies hire developers and designers, we're seeing the same problem. When I took a look at my workforce two years ago, I saw that I hadn't created a diverse team. Even though we were following the typical playbook — posting open positions on job boards that specialize in attracting candidates from underrepresented groups, sponsoring events, giving scholarships, and training our employees on inclusion and hidden bias — we weren't seeing progress.

In order for our team to match [the diversity of America](#), we'd need 13.4% black, 1.3% Native American, 18.1% Latinx, and 50% women employees. We were nowhere near those numbers, and I believed it was a moral and [business](#) imperative to change my company.

I first needed to see what we were missing. I interviewed more than 50 people from underrepresented groups who *have* made it in the tech industry, asking them to help me understand why they weren't applying for my open tech jobs. They were kind enough to be blunt: "My community does not trust companies that are majority white and male. We do not see people like us succeeding in those companies. Why would we apply for your jobs?"

I dug into the numbers on technical roles. U.S. companies are [failing to hire](#) black, Latinx, and women Computer Science graduates. And research shows that once women and people of color join tech companies, retention rates are much lower than that of white men, often due to bad treatment in the workplace. Women leave tech companies [twice as fast as men do](#).

Based on my interviews and research I learned four fundamental things:

Underrepresented groups are not generally aware that they could get high-paying jobs in tech and that they don't need a college degree to do this. This is because very few, if any, people in their community are working and succeeding in tech, so they are not encouraged to seek this opportunity.

The [median household income](#) of black families in the U.S. is 39% less than that of white families; for Latinx families, it's 27% less than white families. This reality makes it more





difficult, even impossible, to take time off from one's job, pay for childcare, and earn a Computer Science degree or attend a coding bootcamp.

Trust between underrepresented groups and tech companies is extremely low, so even if there are job openings, many won't apply.

Even if people from underrepresented groups acquire the right skills and apply for tech jobs, many companies still won't consider them for an interview if they don't have a Computer Science degree.

To address some of these issues, my company decided to create a pilot apprenticeship program to create and grow a sustainable diverse talent pipeline separate from that of college graduates.

In January 2017 we partnered with Colleen Showalter from the local Boys and Girls Club (BGC) in Portland, Oregon, and asked if they would help us recruit new talent, ages 18 and above, from underrepresented groups. We said that we were looking for hard-working individuals with a high school diploma, whom we could train on all the hard skills necessary to become a software engineer and then hire as paid apprentices.

Unlike tech companies, BGC is a trusted organization within the underrepresented community. They recruited a group of 30 individuals, ages 18-20, who expressed interest in the program. We selected 15 people from that group who demonstrated strong work ethic, grit, and excitement for the program. We then enrolled them in online courses teaching necessary job and technical skills, like computer science fundamentals, complex problem solving, group collaboration, agile methodology, effective written communication, and so on. We mentored and supported them over six months, as they completed their courses.

Five out of the 15 participants successfully completed the training and were hired as apprentices at Treehouse and two other hiring partner companies in Portland (Nike and InVision). The 10 that didn't complete the program returned to their pre-program jobs. For the five successful students, we created a detailed, customized six-month on-boarding program for ourselves and the hiring partners, which was designed specifically for underrepresented people of color and women who had not earned a CS degree and had no previous tech industry experience.

The program recommended soft-skills training, daily and weekly plans to achieve technical milestones, clear expectations on their output and performance, and daily video calls to gauge happiness, give encouragement, and deliver feedback. Apprentices were paid a minimum of \$15 per hour for 40 hours per week, for a period of three months, and providing they met the specified requirements, they were converted to an annual salary of at least \$55k + full medical and dental benefits.

We also created a detailed six-month mentorship program for the hiring partner companies. This gave managers instructions on how to assign appropriate mentors for





each employee and offered mentors a few resources: diversity and inclusion training, detailed daily and weekly plans for working with apprentices, specific guidelines for measuring the success of apprentices (as their progress would not necessarily mirror that of CS graduates). At first we were concerned that it would be difficult to recruit mentors because of the extra workload. But we actually ended up with too many volunteers.

The results of this pilot were overwhelmingly successful. Four of the five apprentices have successfully converted from hourly pay to salary plus benefits, and they are all still successfully employed with the hiring companies. The feedback from employers has been positive.

Of course, there were some areas that we'll continue to work on and improve for the next pilot program. For example, we found that many participants felt pressure to join the program so they could improve their family's income. But without a real passion for tech, they wouldn't successfully convert from apprentice to salaried developer. In the future, we will screen participants to make sure they truly want a career in tech, not just a higher salary.

We also realized we need to provide access to laptops and broadband. And we learned that we need to offer more equity, diversity, and inclusion training to the company partners, as more hiring managers were eager to participate than we expected. In future pilots, we will also be increasing the length of diversity and inclusion training to an eight-week program.

We believe that investing in our local community is the *moral* thing to do, but what's the cost and ROI of program like this? Let's say you are hiring 10 developers and using a combination of an internal technical hiring team and an outside recruiter to fill those positions. Using standard industry benchmarks as inputs for compensation and time to interview and onboard, it's going to cost you around \$2.046M to source, hire, onboard, and then compensate that cohort of developers for one year (who likely are not from underrepresented groups). However, if you invest in creating talent, these same costs would only amount to \$723k. That's a saving of \$1.323M or an ROI of 894%, *and* you'll create a diverse team, which is proven to generate more profit.

The early results of our internal pilot program were so encouraging that other technology executives asked me to install a similar program for them. We are rolling out important changes to the program for future cohorts, and installing them at Airbnb, Nike, Mailchimp, HubSpot, Acquia, InVision, MINDBODY, Adobe, and Chegg.

We are still learning, iterating, and updating our solution. The systemic challenges we're all experiencing around creating diverse teams still exist. But this is the beginning of a viable alternative solution to the historic lack of diversity in tech.





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