

Skills Needed by Software Engineering Interns
(Technical Report)

A Social Construction of Technology Analysis of the Amazon AI Hiring Tool
(STS Research Paper)

An Undergraduate Thesis Portfolio

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Bachelor of Science in Computer Science

By

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My technical and STS projects both address aspects of the socio-technical problem/ challenge of the social constructions against women in STEM. My technical project reflects my efforts to become more confident in my skills and marketable to the industry as I felt the opposite during much of my college career and how a course that aims to teach students these real-life industry skills can better students' confidence in their future workplace. My STS project is a deep analysis as to why I felt inadequate and how that relates to a bigger problem in society in shaming women who want to go into STEM, utilizing the failure of the Amazon AI Hiring Tool. In what follows, I will go more into depth about each project that I set out in my prospectus and how working on both projects simultaneously has allowed me to grow and learn even more.

My technical project investigates my work at Fortitude Technologies, a government contracting company that had us interns work on a project to efficiently automate emails coming in from the government with open positions to become more competitive against other companies. By being so immersed in real-life industry practices and skills, I truly felt like a software engineer, and I think students would benefit greatly from a course that taught those skills and practices.

My STS project analyzes the deeper meaning behind why especially women can feel inept in their STEM careers. I proposed that because of the social construction against women pursuing STEM careers, that has led to an increased feeling of imposter syndrome amongst women in STEM and especially tech. This disproportionate representation of women in STEM led to the failure of the Amazon AI Hiring Tool that discriminated against women's resumes simply because most of the previous data was obviously male resumes. This would not have

happened if women were given more of a voice and chance in the industry. If we give women more encouragement from a young age to go into STEM, the tech industry specifically will have a more balanced viewpoint on how to meet every user's needs.

My technical project influenced my STS project in that the skills that made me more confident in my ability to become a software engineer were a direct reflection of my imposter syndrome, since I was a woman in a male dominated field. Noticing that insecurity in myself, I made the connection that women have been discouraged when they are children to not go into STEM or at least make it seem like they cannot be successful in the field. It was a deeper problem and not a current gender issue. I strongly believe that the Amazon AI Hiring Tool could have been avoided if women were a part of the development and could notice that outstanding resumes that the AI is trained to look out for is male dominated – because the field is male dominated. It causes a vicious cycle. Both of these projects has opened my eyes even more and made me realize just how much work still needs to be done to encourage women going into STEM and get women into the discussion and development of technology, because if we don't have women, we will continue to create biased technology.

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