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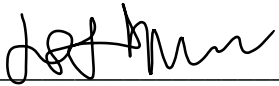
Sociotechnical Synthesis

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Sociotechnical Synthesis

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The relationship between my technical project and my STS research paper can be attributed to my anxiety about getting hired post-graduation. From a student's perspective, I could not see how higher education would explicitly prepare me for the workforce, despite years of being told that attending college is essential to obtaining well-paying job. I wanted to explore the realities from higher education to employment. My technical project delves into the technical interview, a sort of gate keeper to a majority if not all jobs in the computer science field. The technical interview is the bridge that students need to build to get to the other side, which is getting employed. Continuing this analogy, my STS research paper focuses on the student and to prepare them to understand this bridge. Engineering practice requires an engineer to consider the potential outcomes and consequences of a design and how the design is implemented. STS is particularly relevant as it helps a new engineer identify the actors associated with the design and how these actors are connected to one another. Using this approach, I identified the key actors and how others could be indirectly affected.

In my STS research, I propose specific changes in the computer science curriculum that focus on the students' preparedness for meeting the requirements of today's work force. The primary attributes of an updated curriculum centers on the following: providing students real-world experience, developing soft skills associated with interpersonal relations and team work, and understanding the importance of ethics in regard to implications that may occur in an organization and the significance of ethical codes of conduct. Additionally, I also discuss the potential consequences of curriculum changes that enable students to be more prepared for entering the workforce with increased confidence. In the technical portion of my thesis, I produced a product similar to what I did in my STS research paper. Instead of focusing on the employability of students, I focused on that which connects students to employment. I

propose curriculum changes that addresses the challenges that most students will face when they start their job hunt in the computer science field. Preparing for a job would be useless if one cannot get the job in the first place. I discuss what is missing from the current computer science curriculum, what we can do about it, and the associated logistical challenges.

The two projects presented in my technical portion of my thesis and the STS research paper represent two sides of the same coin. First that there is a disconnect between higher education curriculums and employment in both the public and private sectors. In my technical portion, I focus on the stage between the two, which is arguably just as important as curriculum and employment. They both address the challenges and needs confronting students that major in computer science, which include the technical interview and what to expect from a real-world work environment. Potential ethical issues that arise from both of my technical and STS projects are that they only benefit those who already can afford higher education, which might lead to a further divide in socioeconomical classes, and whether it is ok to gear higher education towards employment when some students might not know what they would like to be yet.