Thesis Project Portfolio

Cross Domain File Transfer for AWS Internship

(Technical Project)

The Imbalance of Academic Load and Job Application Process on College Senior's Health

(STS Research Paper)

An Undergraduate Thesis

Presented to the Faculty of the School of Engineering and Applied Science

University of Virginia

Charlottesville, Virginia

In Fulfillment of the Requirements for the Degree

Bachelor of Science, School of Engineering and Applied Science

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Spring, 2022

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Sociotechnical Synthesis

The demand for computer science skills have increased dramatically over the past few decades, and consequently, the number of people who pursue higher education in computer science related majors have grown astronomically as well. As students find themselves nearing the end of their college careers, it is not surprising that the physical, mental, and emotional health conditions of these students are impacted due to the stress of obtaining job security while maintaining good academic standing. My technical project involved working at a high-tier technology company where I designed and developed a proof-of-concept for a customer-facing API that allowed users of the software to retrieve files from different security regions. My STS project is focused on the final year experience of college students that struggle through the balance of academic work and the job hunting process.

My technical project describes my work during a summer internship as a software development engineer intern at a technology company that provides cloud storage services. At this company, I was tasked with adding a feature to their existing API that allows customers in higher security regions to obtain files from repositories that exist in lower security regions. This process can only work if there is an established trust relationship between the repository in the higher security region and the one in the lower security region. This feature was important to implement for a number of reasons. First and foremost, this feature has many underlying benefits that assist in the security of the country, its government, and its citizens. Secondly, this premium feature would eliminate the service's existing limitation by streamlining the file obtaining process through the simplification of user tasks. Lastly and most importantly, it was a feature that existing and potential customers of the service believed would be extremely beneficial and allow them to rely on the service more.

My STS project revolves around identifying not only the apparent but also the underlying impacts of academic overload as it pertains to the college seniors that must manage their responsibilities as students as well as have the time and energy to put toward their career aspirations. This topic is important because many students in their final years of college struggle to maintain a positive relationship between their life, health, and responsibilities. This paper outlines that many of the issues come from the idea that students, universities, and recruiters at technology companies all have different perspectives on what it means to be successful. Many students focus on their academic scores and sacrifice valuable time toward courses that do not benefit their career-related skills nor their well-roundedness. Schools, including those leading up to the college level, stress the importance of grades that cause students to have this fixated mindset. Recruiters will often prioritize interview performance over the student's academic history. People like myself and others do not understand this aspect of college and accept the way things are and remain comfortable in doing what we know how to do best which is to obtain high academic scores. This STS project is an analysis and a reflection of what I believe that students and university curriculum makers should know about the fourth year experience, especially those who are entering a technical field such as software engineering.

My technical project and STS project are not related with each other. However, the difficulties of obtaining the internship and working in a professional environment over my summer inspired me to ask the question in my STS project. It is essential that students understand that they are not alone in their struggles of finding job security before final year of undergraduate study is over. The technical paper focuses on what I did and what I learned from my summer internship as a software engineer intern. The STS project paper provides possible

sources of the workload problem and present possible solutions that could be implemented by the

student and/or university.