Medella: A Health and Wellness Application
(Technical Report)

The Political Implications of Amazon Go Stores
(STS Research Paper)

An Undergraduate Thesis Portfolio

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Socio-technical Synthesis: Automation in Technology

My technical and STS projects can be connected through the use of automation in various technologies. Each of these projects explores how the number of humans used to perform some task can be reduced and replaced by a certain technology. While they both fall under the broad category of automation, each project differs in the type of task that is automated. My STS project analyzes the impact of the automation of grocery checkout on the workforce, and my technical work focuses on the automation of dispatching health and wellness information. Thus, while the specific topics of each project vary, the overarching subject of automation remains constant, yielding it useful to work on both simultaneously.

My technical project was to develop a web application that streamlines the process for developing and distributing wellness information to companies and individual users. Through this platform, administrators can easily create blog posts, video posts, quizzes, and newsletters that can be sent out to subscribed users. The website also displays engagement information including which businesses have registered and with what types of information users are interacting. Prior to creating this application, our client would create each type of content through separate platforms, and he would manually track the engagement data. The web application that my capstone team created automates this work for our client, which in turn increases the reach and scalability of his work.

My STS project explores the idea of automating the retail checkout process. I researched the development of the Amazon Go stores, grocery stores that use “Just Walk Out” technology to check out. Instead of waiting in line and scanning items, shoppers can simply walk out with their items, and their credit cards will be charged automatically. While this technology is innovative, it raises the concern that because humans are no longer required as cashiers, it may result in job

losses for many people. My claim is that these stores are embedded with power relations that disadvantage low-wage workers by showing that Amazon was too focused on the technology while developing the stores and that cashiers will likely lose their jobs and be unable to find other employment. The purpose of my paper is to point out that while the technology itself is impressive, we must also consider the power relations embedded in these stores and how they affect underserved populations.

Working on both projects simultaneously was very helpful. Because of the work on my STS paper, I understand that technologies are often embedded with power relations, and I was able to use this knowledge while working on my technical project. While the website was originally only meant to serve employees of businesses, we shifted the focus to also include users not associated with a company, a group that may have been marginalized previously. Furthermore, working on my technical project allowed me to better understand Amazon's focus on technology in my STS paper. I understand why engineers and executives may have been so focused on the technologies, as this often happened to my team while developing our technical project. Overall, I am glad that I worked on the technical and STS projects concurrently, as each was able to positively impact the other.