Improving the Efficiency of Beverage Refill Rates in Restaurants
(Technical Report)

Social Media Content Moderation: An Ethical Consideration
(STS Research Paper)

An Undergraduate Thesis Portfolio

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Socio-Technical Thesis

In this undergraduate thesis portfolio, three deliverables are presented: the technical report, the STS research paper, and the prospectus. The technical report explores the feasibility of an automated or so-called "smart" drink coaster. Seeing that many restaurants and bars suffer from poor service, my team members and I sought to create a smart coaster. In this smart coaster, we were able to integrate WiFi, weight-sensing, induction or wireless charging, and water resistivity. The smart coaster is an example of how a small technology, while not necessarily pivotal to greater society, can impact and influence lives positively. My STS thesis focuses on the ethicality behind social media content moderation. More specifically, I ask if using humans as content moderators for social media platforms constitutes an ethical practice. While my technical and STS projects are not strongly related, working on the two simultaneously has allowed me to understand that the technology we create as engineers, no matter how large or small, will have some impact on our greater society.

The construction of a smart coaster was an interesting challenge for my team members and I. The project involved the design and construction of three components: the coaster, the induction charging station, and the central server station application. In a restaurant, if the drink on the coaster is empty (detected by the weight sensing electronics), the coaster would wirelessly send a signal to the waiter station informing them of the empty drink. At the waiter station, there would be an app monitoring all the coasters. The purpose of such functionality is twofold. First, such a coaster would eliminate the guest's continual need to ask for service. Second, the server, not always having to monitor drinks, would be alleviated from that particular service burden. The decision to use WiFi was for the purposes of scalability. With a WiFi protocol, potentially hundreds of coasters can be connected to the network, each with a unique IP address or

identifier. In the process of designing and constructing this coaster, my team and I learned many new techniques and technologies and demonstrated that such an invention can be realized.

My STS research paper asked if it was morally ethical for social media platforms such as Facebook and Twitter to ask their content moderators to watch potentially harmful and offensive material. In the social media-driven world we live in today, many nefarious actors on the internet are uploading dangerous and violent content. Traditionally, social media platforms use a combination of artificial intelligence algorithms and human moderation to remove this content. Using Kantian ethics, I derived an ethical judgment on the use of human moderators as the shields for the rest of humanity. Perusing the academic literature, I discovered that the ethicality behind this scheme of moderation was never questioned or explored. To date, this paper is the first to review human moderation from an ethical lens. Researching and writing this paper was a unique opportunity for me as by it I hoped to illuminate a need for further research in this field.

Working on both a technical project and an STS project in my final year at University has allowed me to experience a combined perspective on engineering, both technical and ethical. I am thankful to have received such a combined perspective so early on in my career. Through this whole process, I have learned not only about my subject matter but also on how academics more broadly conduct research and how they present their work in concise and articulate ways. Finally, I hope my work in both the technical and STS realms serve as starting points for future work and research.