

Thesis Project Portfolio

AI POWERED, EMPLOYEE DRIVEN NEWSLETTER

(Technical Report)

REMOTE WORK ARRANGEMENTS AND PRODUCTIVITY

(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

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Spring, 2024

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Sociotechnical Synthesis

The world following the COVID-19 pandemic is painted with reminders of those trying times, and society has been left with many adaptations and precautions that have become ingrained in our daily lives, a testament to the enduring impact of the crisis. While the practices of social distancing and the constant use of face coverings have served their purposes and come and gone, many rituals like Zoom calls and scheduling appointments at the DMV have stuck around. These relics left behind from the pandemic are what provided me inspiration for both the Technical and STS portion of my portfolio. One relic in particular – remote working arrangements – drew a great deal of interest from me. A practice that existed prior to the pandemic but rose to stardom as a result of it, remote work pervaded the lives of many and has worked its way into the norms of society. Inspired by a summer of hybrid work at a once lively office that now lay almost empty, in the Technical Report I describe how I worked to develop an application that would aim to restore a sense of camaraderie and provide coworkers with a place to stay involved in the lives of each other. After seeing and experiencing the realities of remote work, I was inspired to focus the research of my STS Research Paper on analyzing the efficacy of the working arrangement.

In the Technical Report, I describe the motivations behind and design and development of my application – an Employee Driven, AI Powered Newsletter. Presented with the open-ended task of developing an internal tool for the small technical consulting firm I had interned at, the other interns and I applied agile scrum methodologies to develop the web based application over 10 weeks. The premise of the application was to develop a platform where employees could share their updates and happenings in their work and personal lives and view what other employees felt important enough about themselves to share. In order to make the application as accessible and user friendly as possible, we developed the idea for a “newsletter” that would be

displayed on the home page of the site. This “newsletter” is an AI summarization of all of the posts that had been submitted in the time since the last version was created a week prior.

Developed utilizing company best practices, the application was created using Angular to serve the frontend, Node powering the backend, and a MySQL database for storage.

Inspired by my experience in my internship, I focused the topic of my STS Research Paper on remote work. Through my personal experience working from home, I began to wonder whether or not remote work was as effective as the traditional in-office setting, which is why in my research I sought to understand the efficacy of remote working arrangements. For my research, I relied on the Social Construction of Technology framework to help navigate the intricate and ever-evolving landscape of remote work, which is heavily shaped by societal perceptions and norms. To construct an argument, I set out by synthesizing existing literature and studies done regarding remote work and how it performs. Analyzing the context of all of the studies was extremely important to the research, as the circumstances surrounding the findings are vastly different. For example, one experiment showed a positive effect on the productivity of remote workers who had expressed a desire to work from home, while another experiment concluded that remote work had a negative impact on the effectiveness of workers when they were randomly assigned. Additionally, while not directly related to remote work efficacy, other studies found that relationships between groups of employees at companies were weakened and the trust between managers and employees suffered as a result of remote working arrangements. Overall, the evidence seemed to suggest that while remote working arrangements can prove to be as effective as in-office work in the right situation, working from home has a negative impact on productivity.