

Thesis Project Portfolio

Web Networking Platform: Alumni Search Engine

(Technical Report)

Power of Social Media and Acknowledgement of Government Organizations

(STS Research Paper)

An Undergraduate Thesis

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In Fulfillment of the Requirements for the Degree

Bachelor of Science, School of Engineering

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Sociotechnical Synthesis

Communicating with other individuals and creating a strongly connected social group have been huge challenges since the outbreak of the COVID-19 virus in 2019. To prevent the virus from spreading, people practiced social distancing and stayed at home most of their time. This significantly limited their chances of interacting with others and sharing information. Social media was the perfect cue to reduce the limitation. The technology was once considered a mere platform for media consumption and casual social interaction with others, but the virus changed its role from entertainment to almost a necessity. With its strengths in quick and collaborative communication which traditional media such as newspapers and TVs could not provide, it enabled people to create virtual social groups and timely access news updates. Because social media has proven to be incomparably effective in promoting social interaction and sharing information, our society should reassess its potential and actively adopt it in areas that need improvement. The following technical and STS theses explore use cases of social media in two different settings and support how social media can be an appropriate solution to the problems.

The technical thesis proposes a problem faced by a rapidly growing high school and the development of an alumni networking platform that addresses the problem. The high school doubled its student body in less than a year and was struggling to maintain a tight-knit community and connection with its alumni. So, our team of two engineers came up with the idea to develop an alumni networking platform where current students can look up alumni of their interests and easily reach out for asking questions. Our team encountered a few issues regarding personal privacy but still successfully implemented the core functionalities we initially planned.

The STS thesis explores survey statistics and case studies situated in foreign countries and the U.S. to argue social media has become so powerful that it is now regarded as a primary source of information by the general public; therefore, the U.S. federal government and public health agencies such as the Centers for Disease Control and Prevention and the World Health Organization should consider

adopting the technology as their official medium of public messaging to supplement gaps in their existing infrastructures. The absence of appropriate infrastructure in these organizations was conspicuous during the pandemic when U.S. citizens were seeking public health guidance and vaccines. The survey statistics show that people tend to visit social media to find news rather than traditional mediums, and the case studies depict how social media was incorporated into public messaging to improve vaccination rates and curb infection cases in two foreign countries and the U.S.

The paper provided a starting point to reconsider how we can utilize social media for a greater purpose. Developing the alumni networking platform raised a few privacy concerns, but it still built a strong foundation for later success. Also, the STS thesis suggested the potential of social media even though it could not extensively explore all evidence.