Thesis Project Portfolio

Implementing New Features to Lou's List to Promote Interconnectivity within UVA (Technical Report)

Evaluating the Impacts of Social Media on Adolescent and Young Adult Populations in the United States: A Examination of Advocacy Efforts and Legislative Responses (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

Richard Kim

Spring, 2024

Department of Computer Science

Table of Contents

Executive Summary

Implementing New Features to Lou's List to Promote Interconnectivity within UVA

Evaluating the Impacts of Social Media on Adolescent and Young Adult Populations in the United States: A Examination of Advocacy Efforts and Legislative Responses

Prospectus

Executive Summary

Loneliness and feelings of isolation have been on the rise for students in college. However, feelings of anxiety and depression have also been on the rise in teens and young adults. This portfolio attempts to focus on helping students feel less lonely and isolated while also taking a look at the impacts that software such as social media has had on teens and young adults. The capstone project focuses on the improvements implemented on the currently available Lou's List website and allows users to build, comment on, and share course schedules to friends to promote connection between users to lessen loneliness and isolation. In contrast, the STS research paper examines potential negative effects that technology such as social media can have on its users, specifically young adults and teens. The paper takes a closer look at the negative impact social media has had on the younger generation and how society's advocacy groups are regulating social media. The STS research paper provides insight on the ethics of creating a social software service by bringing to light the impact it can have on its users.

The University of Virginia has undergone rapid changes in both curriculum and community. The project in the course "Advanced Software Development Methods" at UVA emerged as a hypothetical response to this rising need. The main goal of the project was the implementation of additional features to the already existing Lou's List website. Lou's List is a well-known online platform and fundamental resource within UVA that has helped UVA students build their course schedules since its creation in 2009. The reason for implementing additional features and improving website layout were to cultivate a sense of interconnectivity among UVA students as well as making the scheduling process not only easier but potentially collaborative as well. Using the Agile Scrum methodology to create a website that would help students to not only create their ideal class schedules but also help forge meaningful connections with their peers. The website offers a cleaner user interface and a search bar to make navigation to different course lists easier. Additional features such as a friends system promotes interconnectivity of UVA students by allowing users to view added friends' course schedules as well as connect with their friends through the implemented systems. Future work includes

implementing additional features to promote interconnectivity for users through interactions as well as maintenance of the backend infrastructure.

Social media has had an observable impact on teens and young adults in the United States. Depression, anxiety, and other mental health impacts due to social media use is documented and widely available online. The STS research paper seeks to determine in what ways social media has impacted the younger generation and how advocacy groups worked to regulate social media. The politics of technology, social construction of technology, and technological determinism frameworks are used to support information gathered regarding social media's impact on society and society's impact on the development of social media. The information presented in the STS research paper could be used to offer insight on social media's influence on the development of society through the influence of the young population and how social media's development can still be altered and isn't unmalleable.

Upon reflection, working on the STS research paper has provided valuable insight into the ethics of producing a social software as a service such as the improved Lou's List. While the target goals of reducing loneliness and feelings of isolation that undergraduates face by offering a service that promotes interaction and connection, social technology such as social media has had a negative impact on young adults and teens. From depression to anxiety, the negative impacts social media has had on mental health is well documented. Developers of all forms of technology have a responsibility to recognize the potential negative and positive implications that their products may have on society. This STS research paper has brought attention to the need of ethics research in all fields of engineering.