Thesis Project Portfolio

Library Resource Promotion via Browser Extension.

(Technical Report)

Young Adults and Fake News: Perception and Evaluation Progress Throughout and After University.

(STS Research Paper)

An Undergraduate Thesis

Presented to the Faculty of the School of Engineering and Applied Science
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In Fulfillment of the Requirements for the Degree
Bachelor of Science, School of Engineering

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Sociotechnical Synthesis

Nowadays, with the ubiquitousness and affordability of the Internet, one can find an answer to almost anything online with a simple click. Online resources and information are abundant, however, not all of them are accurate and free. My theses are related by looking at resources available to people and how people perceive and make use of them. However, they differ in the approach of understanding and final outcomes: my technical project looks into how well UVA library resources and services are being utilized by the community and develops a browser extension that helps promote them to the public, while my STS look into young people's perception and evaluation progress towards fake or manipulated information throughout and after University. My technical project aims to increase the public's awareness of the free resources provided at the UVA library, hence make better use of them; and my STS thesis seeks to understand how college education influences ones' perception and evaluation toward fake news.

The technical project focuses on developing a Chrome browser extension for the UVA library. The UVA library system is amongst one of the biggest public libraries in the nation with a plethora of books, articles, researches, and rich-media resources. Hence, it is rewarding that the public is aware of this free capital. My team's extension recommends users with resources and services offered by the UVA library system based on the user's searches on commercial marketplaces or a search engine like Amazon.com, Barnes and Noble, and Google Scholar. We start by extracting requirements from our clients, using the requirements to draft a wireframe of the final product, iterate different versions of wireframes for clients' approval, and coding the

product based on the approved wireframes. Throughout this process, besides technical knowledge, I learn to work with teammates who have the same expertise as mine but different styles and personalities. I also learn to use my technical knowledge to extract requirements from my non-technical clients and transfer them into a software product.

The STS thesis investigates the relationship between fakes news and young people before, during, and after university. The research set out to understand how higher education can influence young people's perception of fake news online. People in the 15-24 age group account for the highest percentage of all users on popular social media platforms such as Facebook, Instagram, and Youtube. Besides, social media is recorded as the number one news source for young adults. Studies from several countries have shown that young people are less interested in news (particularly political news) and less informed than their counterparts in earlier decades. However, young people nowadays are not ignorant, rather, they get their news from other sources. By conducting interviews with university students of different ages, my research finds that friends, study expertise, and years in schools can influence one's news evaluation. In the same context, with more information now served online, software engineers need to consider their ethics before, during, and after designing programs or algorithms that facilitate information on news platforms.