

# **Thesis Portfolio**

**Library Resource Promotion  
via Browser Extension**  
(Technical Report)

**The Great Exhibition – A Common  
Format for Technological Sharing**  
(STS Research Paper)

An Undergraduate Thesis  
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with Ashish Upadhyaya, Benjamin Ormond, Nitesh Parajuli, Ryan Kelly, Tho Nguyen, Yakesh Sitoula

Technical advisor: Dr. Ahmed Ibrahim, Department of Computer Science

#### **THE GREAT EXHIBITION – A COMMON FORMAT FOR TECHNOLOGICAL SHARING**

STS advisor: Kent Wayland, Department of Engineering and Society

### **PROSPECTUS**

Technical Advisor: Dr. Ahmed Ibrahim, Department of Computer Science

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There has been, and often remains, a gap between the time when a new technology is initially released, and the time when it is widely accepted by both the general public and applicable industries. Promotion frequently helps to boost these new and unfamiliar technologies into the so-called “public eye.” Both my technical and STS research projects highlight this idea of promotion, with the end goal of broader technological usage and acceptance by the general public. My technical topic revolves around the development of a browser extension that advertises the resources available through UVA’s libraries, working to create broader awareness of the libraries’ offerings. My STS topic centers on the first World’s Fair, The Great Exhibition of the Works of Industry of All Nations. Colloquially referred to as the Great Exhibition of 1851, this event showcased over 100,000 technological exhibits from 32 countries to its over six million public visitors. The two particular cases discussed in my Technical and STS topics, respectively, are separated by over 160 years and are of very different scales. Together they serve to highlight the broad spectrum of technological promotion scenarios present throughout history. Clearly, technological promotion is something that truly transcends time and space. It is an issue whose analysis is not only beneficial to present-day promoters, but for generations to come.

My Technical project, as previously mentioned, was the creation of the UVA Library Browser Extension. The rationale for creating the extension was that, should students and faculty be reminded of the resources available from the UVA Library system, they might make more frequent use of them, allowing users to save both money that they may have potentially spent elsewhere on materials and research time. The project was conducted in a 7-person team, which worked in association with numerous stakeholders from the UVA Library to create a Google Chrome browser extension. The team spent both the Fall 2019 and Spring 2020 academic

semesters working on the project, producing a complete extension by March of 2020. This completed extension is designed to aid users in their research, automatically displaying more than a dozen library results related to content browsed on Barnes and Noble, Amazon, and Google Scholar. Functionality also allows for the changing of the item search type, search history tracking, and manual search initiation. These additional features allow for further user interaction and help facilitate convenient research. The finalized product is presently slated to be uploaded to the Google Chrome web store, making the extension freely accessible and available.

My STS research problem focuses on analyzing the Great Exhibition's success as compared to its predecessors' lack thereof. In determining the key features of its success, they might be emulated in future shows, helping to once again effectively promote new and foreign technologies. The respective success and comparative failures of these shows was analyzed by examining both the political powers overseeing them, as well as the makeup and design of each's exhibitionary governing body. In the case of the Great Exhibition, Prince Albert, a German who was husband to Queen Victoria oversaw the Great Exhibition. As an international man himself, Albert encouraged that all nations be given the spotlight, also aiming to open the expo to all of England's populous. The predecessors of the Great Exhibition, however, were largely overseen by governments wanting to promote nationalism for their country, making international exhibits sidelined or fully banned. With regard to governing bodies, the Royal Commission formed to oversee the Great Exhibition was designed to account for internal turmoil and a diversity of opinions, while the governing body of the previous French expos was formed almost retroactively, and only had exposition management as a secondary aim. From all of this, it is clear that full internationalism – not nationalism – along with delicately-crafted overseeing bodies are necessary to make such events iconically successful.

Overall, I feel that both of these projects were fully successful. The Browser Extension has already been requested by countless UVA students upon its release, and has proved to be very popular among the Library faculty as well. My STS research, too, has achieved its aims, though to less fanfare. Both of these projects have concluded relatively well, leaving little need for continued research or development on either, although expansion upon each's ideas remains possible. With these developments in the area of technological promotion, further public education and acceptance of new technologies can hopefully become even easier.