# **Thesis Project Portfolio**

# Leveraging Twitter Data: Creating a Global Hub of Trending Events

(Technical Report)

# **Exploring Social Media and the Fear of Missing Out**

(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

John Nguyen

Spring, 2023

Department of Computer Science

# **Table of Contents**

Sociotechnical Synthesis
Leveraging Twitter Data: Creating a Global Hub of Trending Events
Exploring Social Media and the Fear of Missing Out
Prospectus

### **Sociotechnical Synthesis**

### Introduction

The main commonality between my technical paper and my STS research is that they both involve social media. My technical paper details my experience as a software engineering intern where I helped build an application that aggregates Twitter trending topic data, allowing users to easily see and compare trends from around the world. Likewise, my STS research focuses on one of the most common drawbacks of social media use, dealing with the fear of missing out, or FoMO. My STS research was in part motivated by my technical project, as I was consistently exposed to, and working with Twitter over the summer. This caused me to think more deeply about the impact of social media, especially its influence over its users, which lead me to explore the link between social media and FoMO.

## **Project Summaries**

The technical portion of my thesis produced a fully functional web application that enabled users to keep up with current events from all across the globe through the use of Twitter trends. I and the four other interns assigned to this project were given free reign over the design of our application. Our application was called Sozin and featured two main pages, the first being the home page and the second being the locations page. The home page featured a list of the current top 50 ranked global trends as well as a heatmap. Additionally, on this page users could see the trends in a given location or country via clicking on the map, as well as view a collection of sample tweets for a selected trend. The locations page contained a search functionality where users could enter a location and see the list of trends in that area.

In my STS research, I explored the relationship between social media and FoMO. My goal with this research was to gain a better understanding about why social media and FoMO are so often times linked together and in doing so, present my findings in a way which is easily

digestible. In my paper, I examine the social media landscape, specifically focusing on what about it seems to permeate FoMO among its users. I then analyze FoMO, its potential negative effects on well-being, and how social media plays a role in exacerbating it. Lastly, I end the paper with potential solutions that can help reduce FoMO among social media users.

#### Conclusion

As someone who has witnessed and participated in the growth of social media for over a decade, both my technical and STS work have provided me with a greater picture of the impact of social media. As social media has exploded in growth, it is no longer just a means of communicating with friends and family. Today, social media platforms can have both very real positive and very real negative effects on those who use them. On one hand, my technical work showcases a way in which social media data can be used to help keep people educated on what is happening around the world. On the other hand, my STS work analyzes a way in which social media can have a negative impact on someone's well-being. While the main focus of my work was on social media, this way of thinking can be applied to any current or future technology. There are always going to be positive and negative implications for any technology created, some of which may not have been initially accounted for. Because of this, it is crucial that we as engineers act to not only minimize the consequences of our work, but also respond to any that may arise.

I would like to acknowledge my STS professor, Richard Jacques, my technical writing instructor, Rosanne Vrugtman, and my technical advisor, Briana Morrison, for all of their help in completing my senior thesis portfolio.