

**MY SOFTWARE DEVELOPMENT INTERNSHIP EXPERIENCE AT THE
UNIVERSITY OF VIRGINIA DEVELOPMENT HUB**

**PREVENTION STRATEGIES AGAINST CYBERBULLYING AND INTERNET
HARASSMENT AMONG CHILDREN AND TEENAGERS**

An Undergraduate Thesis Portfolio
Presented to the Faculty of the
School of Engineering and Applied Science
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Bachelor of Science in Computer Science

By

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SOCIOTECHNICAL SYNTHESIS

To conduct proper research, it is essential to possess a set of skills that would ensure that the results of the study are scientifically accurate and produced properly. In my technical research called "My software development internship experience at the University of Virginia Development Hub," I described my internship experience at UVA Dev Hub. Moreover, I came up with a list of skills and classes at UVA that helped me to succeed during my internship. In my STS project called "Prevention strategies against cyberbullying and internet harassment among children and teenagers," I summarized the current state of cyberbullying and its prevalence among children and teenagers. Additionally, I analyzed potential solutions that might be implemented in the future using artificial intelligence. In my technical project, I describe my internship at UVA Dev Hub which gave me experience and a necessary set of skills to conduct my STS research. Moreover, that experience expanded my computer science knowledge and helped me better understand potential solutions to the problem of cyberbullying among children and teenagers.

The modern software engineering industry is developing rapidly and the skillset necessary to enter this field changes all the time. Therefore, it might be difficult for students to adapt so fast, and their first internship might be extremely stressful. As a result, I decided to describe my internship at the University of Virginia Development Hub so that other students can learn from my experience and adapt faster to a professional environment. My goal was to describe my internship in detail so that other prospective interns do not feel anxious about their first internship and know exactly what to expect. At the same time, I was trying to make a list of technical skills and classes at UVA that helped me to succeed during my internship.

As a result of my research, I described my two-semester-long internship in detail. I explained how I worked on the Discord bot for the UVA transportation system with my first team. Also, I described how I worked on the cryptocurrency calculator during my second semester at UVA Dev Hub. As a result, I concluded that it is extremely helpful to know all of the most up-to-date programming languages and frameworks specific to the industry. Moreover, I concluded that UVA classes, such as Advanced Software Development and Algorithms helped me to prepare for my first internship.

The goal of my STS research was to analyze the current state of cyberbullying and its prevalence among children and teenagers. I was trying to show that this problem is still extremely important using the statistics and works of other researchers. Moreover, in my work, I was trying to analyze different prevention strategies that big social media platforms use to fight against cyberbullying. Finally, I tried to propose a potential solution that can be implemented in the future. Since the problem of cyberbullying is very complex and involves multiple different actors, I decided to use the Actor-Network Theory.

In my STS project, I provided multiple different sources that can serve as evidence that the problem of cyberbullying among children and teenagers is still present and requires to be addressed. For instance, Dan Olweus, in his research paper, claims that some studies report that over 50% of students experience cyberbullying at some point. Moreover, Julia Lapan, in a recent large national survey of 1588 middle school youth, ages 10-15, discovered that 32% of surveyed students had experienced online harassment. Finally, According to Dilmurod Rakhmatov, machine learning opens up many opportunities for preventing cyberbullying. This evidence from other scientific works serves as proof that cyberbullying is still prevalent among children and teenagers and there might be a potential solution that will use artificial intelligence.

Both my STS and technical research can be expanded and studied further in the future. I can add my other internship or work experience to my technical paper and expand the list of classes and skills that can help students to succeed during their first internship. Moreover, I can research the state of cyberbullying again after a certain period of time to better understand its state and the potential solutions.

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STS advisor: Catherine D. Baritaud, Department of Engineering and Society

PROSPECTUS

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