Thesis Portfolio

Usage of Windows Event Log Analysis to Improve Cyber Defense
(Technical Report)

Looking Towards the Future: Autonomous Vehicles and Social Consequences
(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

Cybersecurity is an ever-expanding field within the realm of computer science that focuses on the protection of networks, programs, or really any form of device that may be vulnerable to cyber-attacks. With cyber-crime on the rise, cyber-security is quickly growing to become a prominent tool used world-wide as a method of defense. I find it be incredibly fascinating, and plan on putting my knowledge in the field to use as I pursue a career as a cyber-defense analyst for the government after my graduation.

Completing these theses has been a wonderful journey. By doing so I have put my accumulated knowledge of cyber security to use, conveying both my technical understanding of the subject as well as the real world-social impact created by the technology. Doing so has allowed my personal reflection on the subject, and has served as an inspiration for my continued work within the field.

My technical paper discusses the completion of a multi-step assignment I was given by the DARPA sponsored P-CORE organization, whom I was doing cyber-security related research for at the time. For this assignment I was to create a virtual environment to run cyber-attacks in, and then record the windows event logs generated by the attacks in order to better detect similar cyber-attacks in the future. The paper was written to primarily describe the implementation of the process, with parts of the wording being simplified to make it easier for non-computer literate individuals to understand.

For the STS paper, the topic of focus was autonomous vehicles and their social impact on society. The framework chosen to aid in this examination was the social construction of technology (SCOT). Using the tenants of said framework, I examined how the technology was

used by others, as well as the different social groups that were both positively and negatively changed by the implementation of said technology. From this research a conclusion was drawn that no matter what kind of ethical impact self-driving technology may have on society, it's here to stay.

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