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Cybersecurity

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Cyber Security Analyst

In regards to the Cyber security field, there are many different branches to consider. Personally, becoming a cyber security analyst is a career that I mostly envision for my future self. There are many responsibilities, and work that come along with this career. A cyber security analyst must protect a company's network and systems from cyber attacks. This involves detecting suspicious activity, reporting security branches, creating plans, and researching upcoming IT trends (Duggal).

According to the National Academies Press, cyber security analysts must rely on social science research and social science principles in this particular field. Using these principles and research methods, many analysts are able to conquer several challenges, because it is necessary to understand which individual, group, or community is at risk of being attacked. This field requires quick problem solving skills, as well as being able to interpret when an issue is present, or occurring.

Regarding the material from class, there is a clear relation between cybersecurity and science. Similar to the scientific method, data analysts adopt systematic, and data-based approaches. Most analysts depend on these social science research, and principles. For instance, in social science research observations help identify repeating patterns, while an analyst uses

them to identify these unusual patterns. Applying these science principles to this field requires method-based thinking that assists in addressing these digital matters (Mukherjee).

The responsibilities of a data analyst relate directly to the material that has been reviewed in class. Differentiating fake and real websites is a skill which data analysts must require. Fake websites carry a weak URL, and lack many factors which determine a reliable source. While real websites carry a secure URL, good design, and clear contact information. Similarly in the analyst field, many are required to spot these questionable websites, company's and so forth (Mukherjee). Another concept that has been reviewed in previous classes is the theory of data breach notification. Particularly, social science theories like social contracts and risk communication explain the role of cybersecurity analysts, by protecting these digital sources, and other present threats (Mukherjee).

Criminal Justice is centered around the study of criminals, the law enforcement, and the legal system. In relation to cybersecurity, the focus shifts towards cybercrimes, and developing legal deals, responses, and preventing cyber threats in the future. Psychology is the study of the human mind centered around behavioral, cognitive, and emotions patterns. In relation to cybersecurity the study of Psychology can be implemented in learning the thought patterns of cyber criminals. This explains why it's important that cybersecurity analysts focus on social science research and principles.

The information learned can teach us what it's like in the mind of a cybercriminal before and after an attack. Sociology is the study of human societies. The central focus of this study is the structures and dynamics of our society. In relation to cybersecurity sociology can be used to study the structures of cybercriminal communities and organizations.

Political science is the study of government, politics, and public law. In relation to

cybersecurity political scientists work to analyze the cybersecurity world. Their work helps create cybersecurity laws, regulations, agreements we see today. These practices provide us valuable insights and expertise that connect with our world of cybersecurity. These practices contribute to our understanding of the technological, social, legal, and political aspects of being a skilled analyst along with its challenges and solutions.

The cybersecurity job is a complex career that requires attention, and precision. Due to the jobs flexible hours, and comfort of working from one's home, or desired location. The demand for this field is popular. With the presence of constant cyber attacks, AI advancement, and cyber crime. Fortunately this career field continues to increase its demand as technology continues to grow and advance. Though this career comes with many benefits and job security. It's reported that the minority in the United States are extremely underrepresented in this field. According to the article published by Berkeley University, it's reported that representation of Black, Latino, and Native people in this particular field is lower than the general labor force representation in the United States (Berkeley).

In relation to the marginalized group, it's clear that entering this profession needs a lot of dedication, hard work, and connections in order to achieve the luxurious job. Especially for me, being a black African American man, it's clear that I must strive to work hard and stand out compared to other applicants.

There are many challenges that arise when considering this career path. This job requires a lot of managing, responsibility, and reliance that the company holds on an individual or team. Being able to communicate, keeping tabs secure, monitoring potential data breaches, and keeping an eye on impending threats is a challenge that can stress many analysts.

Another challenge that arises is being able to keep up with potential hackers (Bhalla). Considering that there are many potential breachers, all using different methods, and techniques to breach into the companies or individuals information. Other challenges that might arise, is being able to ensure that individuals do their part in storing their information, devices, and sources securely. Sometimes, one person cannot manage every individual or particle in the workforce, or the companies they are hired for. These challenges are important factors to consider, along with this career choice (Bhalla).

However, clear communication, following policy guidelines, abiding by the law and incorporating knowledgeable skill and practice can be a solution to this occurring problem. Hackers are being skilled, and more intelligent by the day. Technology continues to advance, and AI continues to develop. Cyber Security analysts must continuously learn, relearn, and keep to date with IT, in order to do their job accordingly (Bhalla).

Considering all factors, it's clear that the cybersecurity analyst field comes with many benefits, and is a complex profession. Through research, many of the data presented online correlates directly to the concepts covered in class. Furthermore, it's important to notice the dependency cybersecurity analysts have on social science research, and social science principles. Understanding the many outliers that come with following this career path, and understanding how the career relates to marginalized groups and society in general. Allows learners to understand both the positives and negatives that come with this career. Overall, the job requires a lot of dedication, problem solving, and interaction with both society and technology.

Work Cited

Bhalla, A. (1970) *What is the hardest part of being a cyber security analyst?*, *Global Tech Council*. Available at: <https://www.globaltechcouncil.org/cyber-security/what-is-the-hardest-part-of-being-a-cyber-security-analyst/> (Accessed: 10 April 2024).

Duggal, N. (2023) *What does a cybersecurity analyst do? (a complete guide in 2024)*, *Simplilearn.com*. Available at: <https://www.simplilearn.com/what-is-a-cyber-security-analyst-article#:~:text=A%20cyber%20security%20analyst%20is,the%20company%20on%20security%20measures.> (Accessed: 10 April 2024).

Mukherjee, S. (2023) *What are the roles and responsibilities of Cyber Security Analyst*, *Emeritus India*. Available at: <https://emeritus.org/in/learn/what-are-the-roles-and-responsibilities-of-cyber-security-analyst/> (Accessed: 10 April 2024).

Read 'A decadal survey of the social and behavioral sciences: A research agenda for advancing intelligence analysis' at nap.edu (no date) 6 *Integrating Social and Behavioral Sciences (SBS) Research to Enhance Security in Cyberspace | A Decadal Survey of the Social and Behavioral Sciences: A Research Agenda for Advancing Intelligence Analysis | The National Academies Press*. Available at: <https://nap.nationalacademies.org/read/25335/chapter/10#153> (Accessed: 10 April 2024).

Berkeley, B.I. (2020) *Cybersecurity and anti-racism*, *Medium*. Available at: <https://medium.com/berkeleyischool/cybersecurity-and-anti-racism-294c0906d83b> (Accessed: 10 April 2024).

