

Cybersecurity Professional Career Paper: Digital Forensics Analyst

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Introduction

Digital Forensic Analysts are essential in the world of cybersecurity. This position is responsible for investigating cybercrimes. More specifically, they collect, analyze, and preserve digital evidence. This career is increasingly important in a world that is becoming more digital every day. They are essentially technological detectives and can work with law enforcement and in the private sector. Another reason this career is relevant is that it heavily relies on social science research and principles.

Social Science Principles

These analysts deal with social science principles on a day-to-day basis. The first of those is human behaviors and motivations. Being a digital forensic analyst means that you are dealing with the psychology of these criminals. They must build an understanding of why these offenders commit the crimes they commit and use that to predict and interpret actions. This is a stressful job, and research shows that participants who undertook this work experienced secondary traumatic stress, compassion fatigue, and burnout (Strickland, Kloess, & Larkin 2023). Digital forensic analysts also deal with principles involved in criminology on a day-to-day basis. Crime itself is shaped by opportunities, incentives, and social pressures. So when dealing with cybercrime, analysts must correctly identify where the actions fall and identify possible motives behind crimes.

Application of Key Concepts

The most prevalent concepts that relate to this career have to do with certain criminological and psychological theories relating to cybercrime. As digital forensic analysts work heavily within the reins of criminological and psychological principles, understanding and connecting these theories is very important. First, cognitive theories are directly related as they

explain how offenders justify their actions and perceive victims. This is something that this career focuses on heavily, as part of catching these criminals takes place by understanding their hows and whys. Behavioral theories are another key concept directly related to this career. Just like any standard crime, cybercrime is a learned behavior. Analysts must find important peers, environmental influences, and social situations that lead to potential offenders.

Symbolic interactionism explains that society can be understood through interactions between individuals. Cybercrime is full of personal interactions, and the analysts in charge of investigating these crimes get firsthand views on how these interactions go down.

Marginalization

Marginalized groups are most affected as the victims of these cybercrimes. Less wealthy people, for example, have less access to afford proper security measures. They are more easily susceptible to becoming victims of the crimes that digital forensic analysts deal with. However, this is where the analysts are there to help. By working with these crimes daily, they start building an idea of how to prevent them from happening in the future. When these preventions become more publicized, it helps marginalized groups who may not have had the proper knowledge or direction beforehand.

Career Connection to Society

Digital forensic analysts are extremely important to the safety and stability of the public and social infrastructures. They essentially act as cyber police and are there to help catch people who have committed crimes against individuals and businesses. By maintaining cyber law, they provide safety and reassurance to those who may have been affected by these criminals. They are, without a doubt, one of the most important careers in cyberspace.

Scholarly Journal Articles

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- Nicolas-Sanchez, A., & Castro-Toledo, F. J. (2024, May 14). *Uncovering the social impact of Digital Steganalysis Tools applied to cybercrime investigations: A European Union Perspective - Crime Science*. SpringerLink.
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