

The Career of Digital Forensic Analysts

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Digital forensic analysts are the detectives of the digital world. A digital forensics analyst day to day would involve collecting evidence, investigating incidents, and presenting the findings. The difference is that a digital forensics analyst is looking for evidence of criminal activity that is in computers, networks, mobile devices, or any digital device.

Digital forensics is dependent on social science principles. Without social science, we lose the human element. Cybersecurity careers have become a necessity because of the growing number of cybercriminals. These cybercriminals are human; they think, they have human behaviors, and the cybercrimes they commit are motivated by human emotion. Social science offers explanations as to why cybercriminals commit these crimes, so those in the cybersecurity field can effectively handle issues that arise.

Many social science concepts are closely tied to the career of digital forensics. The human factor and behavioral theories are two major social science principles that relate to digital forensics. The technical aspect of the job must coincide with the human factor that must be present to not only identify evidence and search for it. Decision making, critical thinking, and experience, are all things that help aid informed decisions in the world of digital forensics. These human factors along with digital tools bridge the gap where digital tools alone might not obtain results. Psychology and behavior theories provide a necessary insight for digital forensics by providing a history of learned behavior or environmental influences. These insights help digital forensics analysts better understand the criminal activity and the motivations behind the crime. McAlaney et al. (2024) state, "The motivations and techniques used by cybercriminals are diverse and linked to their sense of

self-identity (p. 124). One way that digital forensic analysts learn how criminals behave on the internet is by the use of honeypot field studies. “Honeypot is a system on the internet that is deliberately set up to allure and trap users who try to attempt and penetrate other user’s systems” (Bijalwan, 2022, p. 66). Digital forensic analysts can use this tool to observe criminal behavior, obtain identification, discover methods used, and determine their motivation.

The most common marginalized group associated with the career of digital forensic analyst are the hackers. Hackers are often introverted, and often fall into a group that resists rules and laws. Another marginalized group associated with digital forensic analyst are sex offenders. This group causes a lot of the turnover of digital forensic employees. Strickland et al. (2023) states, those who investigate online child sexual abuse material more broadly, that were found to be associated with increased levels of stress: repeated exposure to obscene content; pressure to cover leads, make cases, and save live victims. The article goes on to say that digital forensic analyst has a heightened risk of developing psychological difficulties (p. 2). A third marginalized group is the cyber attack victims. The relationship between the victims and digital forensics is difficult to articulate and depends upon the situation.

Dynamic interactions between society and digital forensic analyst evolve daily. Society is constantly changing and in the realm of cybersecurity, cybercrime is changing as well. Cybercrimes are becoming more sophisticated with technological advances. Therefore, the need for digital forensic analyst is increasing.

References

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