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Research Essay

Computer forensics is one of the leading types of investigative processes as the world moves toward a paperless society. This new reality has made investigators and criminal profilers have to rely heavily on data being made accessible from computers that have been used within a criminal investigation. The article *The Role of Criminal Profiling in the Computer Forensics Process* details how methods of criminal profiling should now be used within computer forensics in order to better locate data within a system. This interesting article laid out how criminal profiling works in the modern day, and how we got here, with methods used in the “Jack the Ripper” case from the late 1800s still being applicable today.

Criminal profiling is a skill in which many organizations have their own systems in place to approach a case with. Whether it be the FBI or another, each organization has a set way of completing a profile. Most organizations do follow a similar pattern to the Holmes method of determining if the offender is organized or disorganized.

“Organized offenders are characterized as being above average in intelligence, socially competent, sexually competent, high birth order status, living with a partner, prefers skilled work, having access to a car usually in good condition, may change jobs or leave town, and usually follows crime in the news media. The disorganized offender is typically below average intelligence, socially inadequate, sexually inadequate, low birth order status, lives alone, prefers

unskilled work, lives or works near the crime scene, displays significant behavior change after the offence (e.g., drug or alcohol use), and has a minimal interest in the news media” (Rogers).

These differences can allow investigations to generalize the person they may be looking for, as they collect more details through evidence and interviews. This popular way to profile is a subsection of the inductive profiling model. The other profiling model is called the deductive profiling model, which does not rely on sample groups or generalities to make a profile fit a person. The point of profiling is to narrow the search for an offender, rarely the specific offender is located off a profiling.

The way that computer forensics comes into the picture for profiling is that most criminal activity has transferred to some or fully being online. Meaning, investigators are already transferring their knowledge about profiling over to the cyber world. As investigations happen involving a physical drive off a computer or on the internet, profiling the offender will help limit the number of possibilities that are available to suspect. When receiving a profile about an offender, the investigator will be better equipped to search the certain areas of select devices as they can think like the enemy. Being able to have a general knowledge of how a criminal may act and react to a situation is very useful during an investigation.

The FBI has tried to develop cyber-criminal profiling through stereotyping and grouping people by certain characteristics. Their model included organizational, operational, behavioral, and resource as general characteristic groups. From there, the profile was categorized into three types: crackers, criminals, and vandals. Each type was looked at and treated differently by the FBI. The way they find these characteristics is through a protocol called PRISMA (Preferred Reporting Items for Systematic reviews and Meta-Analysis). “PRISMA outlines a minimum set of items/tasks required for conducting and reporting systematic reviews. It is evidenced-based,

well-regarded and straightforward to apply” (Bada). This system has been troublesome for the FBI as it is heavily based off of generalizations and stereotypes. This is where transferring already established techniques used in profiling criminals can be moved to fit into the cyber world.

Overall, the ever-changing environment of the cyber-crime field is one of the most complex in today’s world. As the criminals are usually a step ahead of the law, it is the responsibility of cyber professionals to create methods to make catching offenders faster and before they are able to hurt innocent people’s lives. The point of profiling offenders is to simplify the search process and understand the what, why, where, and how of the crime and everyone involved. As criminal profiling has had been so successful through history with finding and translating evidence into a full file about an offender, the same should now become possible for the cyber-crime divisions to use and locate felons with. In this new world of crime, it is not an option to be left behind by criminals using new technologies, this is why a new way of profiling is not just needed, but is necessary to mitigating the cyber-crime in the world.

References

Jason R.C. Nurse, Maria Bada. *Profiling the Cybercriminal: A Systematic Review of Research - Export.arxiv.org*. export.arxiv.org/pdf/2105.02930v2.

Rogers, Marc, Author links open overlay, et al. "The Role of Criminal Profiling in the Computer Forensics Process." *Computers & Security*, Elsevier Advanced Technology, 17 June 2003, reader.elsevier.com/reader/sd/pii/S016740480300405X?token=6B1DF3D812EBC65F3CFB11EFA537C6A64CAA96BC140F2A110D7C7604DC2ABAADE27D2960BC0829222D3107D3C2F83598&originRegion=us-east-1&originCreation=20211018202105.