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Digital Forensic Investigation and Linguistic Analysis of Cyber-crimes: A Systematic Review

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Digital forensic investigation (DFI) and linguistic analysis presents unique challenges and opportunities. The study examines how DFI has evolved, noting key theories and models. These are then evaluated based on compliance with established standards and their level of comprehensiveness in terms of addressing important aspects of an investigation. Linguistic analysis of cybercrimes is then explored to establish how it has been incorporated in existing DFI models. The systematic review method is employed to gather literature sources from journals, conference proceedings, and electronic databases. The aim is to identify gaps and propose future research direction for DFI involving linguistic analysis of cybercrime, whileguiding practitioners in the field on best practices for conducting DFI of cybercrime. Findings reveal that linguistic analysis in DFI models has historically been limited, as well as research on the incorporation of artificial intelligence and machine learning. However, with the emergence of semantic analysis in digital forensics (DF), linguistic analysis is now receiving more attention and recognition of its significance.

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