Role of Artificial Intelligence in Forensics

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Abstract: *Artificial Intelligence (AI) is a critical domain within software engineering, focusing on computer processes capable of emulating human behaviors and cognitive processes such as learning, reasoning, adaptation and self –correction. Concurrently forensic science applies scientific methodologies to criminal investigations, specifically concentrating on analyzing evidence within criminal cases. The conventional methods of conducting autopsies and forming opinions exhibit numerous limitations, many of which can be effectively addressed through AI integration. Digital forensics stands out as one of the most rapidly advancing technologies, profoundly influencing the techniques and tools employed for analyzing, monitoring and visualizing crime scenes to mitigate emerging threats and cyber-attacks. Moreover, the realm encompasses forensic medicine, which applies medical expertise to administer justice in Legal proceedings, thereby resolving associate legal complexities. Leveraging the capabilities of AI enables the swift and through sorting of files without manual intervention, significantly expediting investigative processes. Furthermore,AI plays a pivotal role in the identification of mutilated bodies, facilitating the development of tools to reconstruct full facial features. AI generated images can provide remarkable resemblances, aiding in accurately depicting facial features to aid identification efforts. Integrating AI into forensic practices enhances efficiency, accuracy and overall effectiveness in resolving criminal cases.*

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