

# Autonomous AI Agent for Digital Forensics Investigation (Self-Investigating System)

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**Abstract:** Digital forensics involves the systematic examination of digital evidence to understand cyber incidents and support investigations. However, the increasing volume of data and complexity of cyberattacks often results in delays when investigations rely only on manual processes. This paper presents the concept of an Autonomous AI Agent that performs digital forensic tasks independently. The approach integrates machine learning, log analysis and natural language processing to automate evidence collection, anomaly detection, event reconstruction and report preparation. The objective is to demonstrate how an autonomous model can reduce investigation time, enhance accuracy and support investigators in rapidly evolving cyber environments.

**Keywords:** Digital Forensics, Artificial Intelligence, Autonomous Agents, Anomaly Detection, Cybercrime Analysis

