Artificial Intelligence and Financial Fraud Detection: A Review Paper

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Abstract: *The transformative impact of AI in detecting and preventing financial fraud. Conventional fraud detection methods frequently fail to adapt to the rapidly changing nature of financial crimes, especially when real-time response is required. AI, with its advanced capabilities in data processing, machine learning, and anomaly detection, offers promising solutions to these challenges. The paper reviews key AI techniques used in the financial sector, such as supervised and unsupervised learning, and highlights their application in reducing false positives, increasing detection accuracy, and enhancing operational efficiency. Through a thorough review of existing literature and current industry practices, this paper highlights significant research gaps, offers methodological recommendations, and presents findings that advocate for the integration of AI-based systems. The conclusion emphasizes the need for ethical AI use, human-AI collaboration, and regulatory alignment to ensure trustworthy financial systems*

Keywords: Artificial Intelligence, Financial Fraud Detection, Machine Learning, Anomaly Detection, Real-Time Analytics, FinTech