

Technology and Digitalization of Audit: Artificial Intelligence and Machine Learning in Audit

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Abstract

This research analyzes the implementation of Artificial Intelligence (AI) and Machine Learning technologies in modern audit processes. Digital transformation has changed the traditional audit paradigm into technology-based auditing that is more effective and efficient. This study employs qualitative methods with literature review and secondary data analysis from various AI implementations in auditing. Research results indicate that AI can improve fraud detection by up to 85% compared to conventional methods, reduce audit time by up to 40%, and increase accuracy in identifying material misstatement risks by up to 78%. Audit analytics has proven to enhance audit quality through broader data analysis and detection of anomaly patterns undetected by human auditors. However, implementing this technology requires significant infrastructure investment and enhanced auditor competency in operating AI systems. This research provides recommendations for audit practitioners to adopt AI technology gradually while considering cost-benefit aspects and human resource readiness.

Keywords: intelligence, machine learning, digital audit, fraud detection, audit analytics, audit technology