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EDITORIAL

ARTIFICIAL INTELLIGENCE TRANSFORMS ACCOUNTING INFORMATION SYSTEMS WORLDWIDE

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The accounting profession experiences a fundamental transformation as artificial intelligence integrates seamlessly into Accounting Information Systems, creating powerful connections between global dataflows and sophisticated learning algorithms. This technological evolution extends far beyond experimental applications. Recent studies demonstrates that AI now possesses the capability to analyze every ledger entry, suggest control improvements, and generate reports that meet regulatory standards. As these capabilities mature, they reshape the professional landscape by establishing a new paradigm where accountants guide and oversee intelligent systems rather than perform routine tasks manually (Gu et al., 2024).

The auditing domain provides compelling evidence of this transformation's depth and scope. Modern foundation models revolutionize traditional approaches by examining entire populations of transactions and contracts, thereby identifying anomalies that sampling methods typically miss. When auditors combine their professional judgment with these fine-tuned language models, field studies reveal dramatic improvements in anomaly detection rates (Gu et al., 2024). This enhanced capability extends naturally to critical assessments such as going-concern evaluations. Recent experimental evidence demonstrates that decision-tree aids achieve superior predictive accuracy compared to traditional heuristics, suggesting that algorithmic evidence will soon become standard in statutory reporting (Lee & Tahmoush, 2025).

Furthermore, process mining techniques complement these advances by offering unique insights into organizational workflows. Through sophisticated analysis of event logs and gradient-boost modeling of control attributes, researchers have successfully identified internal control deficiencies that conventional testing methods fail to detect (Duan et al., 2025). Together, these developments paint a clear picture where AI enhances rather than replaces human auditors, who must now focus on model validation, exception interpretation, and rapid risk communication.

Internal audit functions experience equally dramatic acceleration through generative AI adoption. Recent demonstrations reveal ChatGPT's remarkable ability to streamline audit workflows by drafting comprehensive audit programs, synthesizing walkthrough interviews, and

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transforming narrative evidence into structured working papers in mere minutes (Eulerich & Wood, 2025). While these productivity gains preserve the essential role of human insight, they fundamentally alter operational expectations by compressing planning cycles and creating demand for near-instantaneous reporting. This shift creates a clear differentiation between practitioners who embrace prompt engineering and model governance and those who resist change.

The transformation extends naturally into managerial accounting, where organizations increasingly rely on AI to enhance their forecasting accuracy, scenario planning, and cost optimization strategies. Despite recognizing these benefits, a comprehensive global survey reveals persistent challenges in data infrastructure and talent acquisition that organizations must address (Zhang et al., 2025). This practical reality intersects with theoretical opportunities identified in recent AIS research, which suggests promising avenues for integrating institutional theory and management control frameworks with machine learning methodologies (Booker et al., 2024). These theoretical foundations become increasingly important as scholars investigate how algorithmic controls shape both decision quality and organizational culture. Additionally, blockchain technology enriches this ecosystem by ensuring data integrity through immutable records that serve as reliable inputs for AI models. Recent reviews confirm that this technological combination significantly enhances cross-border data reliability and auditability (Han et al., 2023).

The evolution of AI in accounting extends beyond practice to transform knowledge creation itself. Although researchers have published over one hundred studies on ChatGPT applications in accounting and finance within just two years, significant gaps remain, particularly in managerial accounting contexts (Dong et al., 2024). Innovative solutions emerge to address these gaps, including Retrieval Augmented Generation systems that automatically curate and cite peer-reviewed literature, thereby democratizing access to systematic research synthesis (Vakilzadeh & Wood, 2025). This technological advancement in research methods suggests that academic journals will increasingly feature studies both created with AI assistance and focused on AI applications.

Educational institutions face urgent pressure to align their programs with this rapidly evolving landscape. Contemporary research involving educators and industry recruiters reveals clear expectations that entry-level professionals must demonstrate competency in data manipulation, model evaluation, and ethical reasoning about AI applications (Holmes & Douglass, 2022). Without fundamental curriculum reform that integrates programming skills, data analytics, and critical AI literacy throughout core courses, educational institutions risk producing graduates who lack preparation for technology-augmented professional environments.

The accounting profession now confronts a defining moment that demands swift, coordinated action across all stakeholder groups. Practitioners must reconceptualize their relationship with AI, viewing these systems as powerful collaborators that excel at processing massive datasets and identifying patterns while humans provide essential context, maintain professional skepticism, and ensure ethical stewardship. The research community bears responsibility for rigorously evaluating emerging technologies, developing theoretical frameworks that explain AI's impact on accounting processes, and establishing guidelines for responsible deployment. Meanwhile, regulatory bodies must create transparent assurance standards that address both model design principles and data lineage requirements.

This transformation's success hinges on collective commitment and immediate action. Educational institutions must redesign their curricula to prepare future professionals for AI-augmented careers. Current practitioners need structured pathways to acquire essential technological competencies. Regulatory frameworks must evolve to provide appropriate oversight

without stifling innovation. Each passing day intensifies competitive pressures and widens the gap between early adopters and those who delay. The profession's response will ultimately determine whether AI becomes a force for enhancing accounting's accuracy, timeliness, and strategic value globally, or whether poorly governed algorithms undermine public trust in financial information. The choice remains ours, but the window for decisive action continues to narrow. Only through unified effort, clear vision, and unwavering commitment to professional excellence can the accounting community successfully navigate this transformative era.

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