COURSE SYLLABUS

AI Applications and Challenges for Auditors Course (Self-Paced)

Explore how artificial intelligence, including machine learning, predictive analytics, and natural language processing, is transforming audit workflows. This self-paced course equips auditors with practical tools to enhance efficiency, detect risk, and navigate ethical and compliance challenges.

> Group classes (Live Online) and onsite training are available for this course. For more information, email onsite@graduateschool.edu or visit: https://www.graduateschool.edu/courses/ai-applications-and-challenges-for-auditors-course-self-paced



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Course Outline

Module 1: Introduction to AI – History, Data Influences, and Technical Progression

- Define Artificial Intelligence and explore its historical development
- Understand the role of structured and unstructured data in AI
- Analyze how data sources like the Surface Web, Deep Web, and Dark Web feed AI systems
- Discuss cloud infrastructure, big data, and the exponential growth of information

Module 2: LLMs, SLMs, and Artificial Intelligence Architecture

- Differentiate between Large Language Models (LLMs) and Small Language Models (SLMs)
- Explore the structure of AI: AI, Machine Learning, and Deep Learning
- Review major AI tools and platforms (ChatGPT, Bard, Claude, Gemini, LLaMA, Copilot)
- Identify AI applications in transportation, healthcare, fraud detection, and creative work

Module 3: AI Products and Searching Techniques

- Compare AI chat interfaces vs. traditional search engines for audit research
- Understand data privacy concerns including PII and PHI exposure in AI usage
- Conduct AI-powered anomaly detection using real audit datasets
- Create audit summaries using AI and assess their risk implications

Module 4: AI Cautions and Ethical Considerations

- Explore ethical challenges such as hallucinations, bias, propaganda, and data misuse
- Examine AI governance frameworks: EO 13859, 13960, 14110, 14141, 14179
- Understand national and international efforts (NIST, UK, EU) for responsible AI use
- Review the NIST AI Risk Management Framework (AI RMF 1.0)

Module 5: Use Cases in AI

- Identify AI applications in document summarization and audit automation
- Explore additional use cases: P-card analysis, geo-mapping, fuzzy matching, vendor data
- Detect AI-generated content in text and images using forensic and analytic techniques
- Discuss the future of AI: AGI, ASI, rogue models, monetization, and workforce impacts