

AI for Tax

Learning Outcomes

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Module 1: Introduction to AI and Machine Learning in Tax

- Understand the basic concepts and history of AI and the core principles of machine learning, including supervised and unsupervised learning, and the more recent shift towards generative and agentic AI.
- Understand the role of natural language processing (NLP) in AI, including its use in conversational and multimodal tools, and its relevance to tax applications.
- Learn how AI is helping agencies automatically classify electronic invoices and detect network anomalies in taxation.
- Learn how AI is helping organisations enforce tax compliance.
- Evaluate potential AI use cases in tax workflows.
- Understand how AI is moving from single-purpose tools towards autonomous agentic systems that can carry out multi-step tax workflows.
- Understand how modern AI can work with documents, images, and other non-text inputs to extract and process tax information.

Module 2: Generative AI and Large Language Models (LLMs)

- Define generative AI and explain the significance of large language models (LLMs) in the AI landscape.
- Understand how LLMs operate, including key concepts such as tokenisation, transformers, attention and fine-tuning.
- Explore ChatGPT's capabilities in semantic search and generative compliance.
- Understand how techniques like keyword and semantic search are used to extract information from tax documents.
- Learn how natural language processing (NLP) and machine learning (ML) are used to extract and analyse key information from knowledge sources.
- Learn how Q&A systems are being used to retrieve information from knowledge sources and provide more accurate responses to user queries.
- Understand how LLMs can be used to extract required information and automatically fill tax-related forms.
- Understand the role of LLMs in converting and processing various data types.
- Explore ChatGPT's capabilities in multi-modal data processing.
- Understand how retrieval-based techniques ground LLM answers in trusted tax sources to improve accuracy and reduce invented results.
- Understand why LLM output in tax should be treated as assistive rather than authoritative, requiring human review before use.

Module 3: Ethical, Legal, and Privacy Considerations

- Explain the concept of bias in AI models, its implications in tax contexts, and strategies to mitigate its impact.
- Identify ethical implications of AI in tax, including issues of bias, fairness, and transparency.
- Analyse case studies where AI bias has impacted tax decisions and propose solutions to mitigate such risks.
- Understand the legal and regulatory frameworks governing AI use in tax, including UK data protection law, the Equality Act, and emerging AI-specific regulation such as the EU AI Act.
- Assess the legal risks and responsibilities when implementing AI and GenAI technologies in the tax domain.
- Recognise the privacy and data-protection concerns of using AI tools in tax practice, and the safeguards used to manage them.
- Understand why explainability matters for AI used in tax, and how techniques that show what drove a decision support review and challenge.
- Understand the role of human oversight in the ethical use of AI in tax, including the limits of relying on automated decisions.

Module 4: Implementing AI in Tax Workflows

- Develop best practices for collaborating with AI vendors and contractors, including effective communication and project management.
- Draft product requirement documents (PRDs) and request for proposals (RFPs) with AI integration in mind.
- Understand the importance of LLMOps, including data annotation, feedback loops, and monitoring in AI-driven projects.
- Follow a checklist to draft an RFP for automating tax compliance and for an AI-based tax filing assistant.
- Improve productivity by applying prompt engineering techniques to interact effectively with LLMs.
- Integrate AI tools into daily tax workflows to enhance efficiency, while keeping a human in the loop for quality and judgment.
- Use basic and advanced prompt engineering techniques to create effective prompts for tax-related queries.
- Understand that the tax professional remains legally and ethically responsible for AI output, and recognise a tax firm's obligation as a deployer of AI under emerging regulation.

Module 5: Risks, Challenges, and Future Trends

- Identify the key risks of implementing AI in tax, including hallucinations, accuracy and reliability issues, bias, and manipulation of inputs of training data.
- Evaluate the performance of AI tools using appropriate metrics, recognising that generative tools producing drafted advice are harder to measure than classification tasks.
- Analyse case studies of AI implementation failures in tax to learn from past mistakes.
- Predict emerging trends in AI and their potential impact on the tax industry.
- Discuss the evolving role of tax professionals in the context of increasing AI adoption in the field.
- Understand the security threats that AI introduces in tax practice, including AI-enabled attacks on client data and on the AI tools themselves.
- Understand the governance obligations of using AI in tax, including the role of firm-wide usage policies in managing risk and security.