AI & Azure in Insurance

Duration: 16 hours

Course Description

This course provides insurance professionals with a comprehensive understanding of how artificial intelligence (AI), machine learning (ML), and Microsoft Azure tools are transforming the insurance sector. Through practical demonstrations and hands-on labs, participants will explore AI use cases such as claims automation, fraud detection, underwriting optimization, and intelligent document processing. The course also introduces Microsoft Copilot for process automation and covers responsible AI practices essential for regulatory compliance and ethical deployment.

Learning Outcomes

Upon successful completion of this course, participants will be able to:

1. Apply AI in claims, underwriting, and fraud detection.
2. Extract insights using NLP and Azure AI tools.
3. Automate insurance workflows using Microsoft Copilot.
4. Design ethical, explainable, and ROI-driven AI solutions.

Course Modules

Module 1: Introduction to AI in the Insurance Industry

- Overview of AI and ML applications in insurance
- Key use cases: claims processing, underwriting, fraud detection
- Regulatory and ethical considerations in insurance AI
- Industry case studies and transformation examples
- **Lab 1:** Exploring Azure AI Services
- **Lab 2:** Image Analysis using Azure AI Foundry

Module 2: NLP and Text Analytics for Insurance

- Introduction to Natural Language Processing (NLP)
- Document classification and keyword extraction in policies
- Named Entity Recognition (NER) for claims processing
- Sentiment analysis for customer support and fraud indicators
- Prebuilt versus custom models for sentiment detection
- Best practices in data labeling and text preprocessing
- **Lab 3:** Text Analytics using Azure AI Foundry

Module 3: Introduction to Microsoft Copilot

- Overview of Generative AI capabilities
- Enhancing productivity with Microsoft Copilot
- Customizing prompts for insurance-specific use cases
- **Lab 4:** Introduction to Generative AI via Copilot
- **Lab 5:** Designing a Dream Destination using Copilot

Module 4: Create Agents Using Microsoft Copilot

- Understanding Agentic AI and its benefits
- Automating repetitive tasks in insurance operations
- **Lab 6:** Building a Task Automation Agent for Insurance

Module 5: Machine Learning for Risk Prediction

- Predictive modeling for customer churn, fraud, and pricing
- Evaluation metrics: precision, recall, AUC
- Ethical implications in AI-driven risk scoring
- **Trainer Demo:** Risk Prediction using Azure ML Studio

Module 6: Business Case Development for AI in Insurance

- Structuring a business case: problem, solution, and ROI
- Case studies: fraud detection and NLP in contact centres
- **Lab 7:** Automate Data Extract from Document using Azure Document Intelligence
- **Lab 8:** Automating Report Generation using Microsoft Copilot

Module 7: Responsible AI and Future Innovations

- Ensuring fairness, transparency, and bias mitigation
- Tools for explainable AI (XAI) within Azure
- Future trends: domain-specific copilots and personalization
- **Trainer Demo:** Implementing Content Safety in Azure AI Studio