

Course No. 1906

AI-Powered Insurance Claims & Underwriting Training Course

**INSURTECH & ARTIFICIAL INTELLIGENCE
INSURANCE & RISK MANAGEMENT**

DURATION

5 Days

DELIVERY

Classroom



Course Overview

The AI-Powered Insurance Claims & Underwriting Training Course provides an advanced and practical framework for applying artificial intelligence to two of the most critical functions in insurance: underwriting and claims management. The course focuses on how insurers can use artificial intelligence, machine learning, predictive analytics, intelligent automation, and data-driven decision-making to improve risk assessment, pricing decisions, claims processing, fraud detection, operational efficiency, and customer experience.

Participants will explore how artificial intelligence can transform underwriting from traditional manual assessment into a more data-driven and responsive process. The course addresses automated risk assessment, customer segmentation, predictive risk analysis, underwriting decision support, pricing inputs, portfolio monitoring, and the identification of unusual risk patterns while maintaining appropriate human oversight.

The claims component focuses on applying artificial intelligence throughout the claims lifecycle, from first notification of loss and document processing to claims triage, coverage assessment, fraud detection, reserving support, settlement prioritization, and customer communication. Participants will examine how AI can improve claims speed and consistency while supporting investigators and claims professionals in complex or high-risk cases.

The course also addresses the governance, data quality, model risk, explainability, privacy, cybersecurity, and ethical considerations associated with AI-powered insurance decisions. Through case studies, practical exercises, AI use-case assessments, and implementation workshops, participants will develop the ability to identify high-value applications, evaluate risks, and build practical roadmaps for deploying AI across underwriting and claims operations.

Objectives

- By the end of the course, participants will be able to:
- Analyze the strategic role of artificial intelligence in insurance underwriting and claims.
- Identify high-value AI use cases across underwriting and claims processes.
- Evaluate data requirements for AI-powered insurance decision-making.
- Apply predictive analytics concepts to risk assessment and claims management.

- Improve underwriting risk classification and decision support using AI.
- Apply AI to claims triage, automation, prioritization, and processing.
- Identify suspicious claims and potential fraud using AI-driven analytics.
- Evaluate AI models based on accuracy, reliability, fairness, and explainability.
- Integrate AI solutions with existing insurance workflows and operating models.
- Establish appropriate human oversight for AI-supported decisions.
- Identify data, privacy, cybersecurity, operational, and model risks.
- Develop performance indicators for measuring AI effectiveness and business value.
- Prioritize AI initiatives according to business impact, feasibility, and risk.
- Develop an implementation roadmap for AI-powered underwriting and claims.

Who Should Attend

This course is designed for insurance professionals involved in underwriting, claims, risk management, analytics, digital transformation, operations, technology, and innovation. It is particularly relevant to Underwriting Managers, Claims Managers, Insurance Risk Managers, Data and Analytics Professionals, Digital Transformation Managers, Insurance Technology Specialists, and Business Process Owners.

It is also suitable for senior executives, actuaries, fraud specialists, compliance and risk professionals, internal auditors, and decision makers seeking to understand how artificial intelligence can improve underwriting and claims performance while maintaining appropriate governance, risk management, and customer protection.

Learning Outcomes

- By the end of the course, participants will be able to:
- Explain the role of artificial intelligence across the underwriting and claims lifecycle.
- Identify practical AI applications that can create measurable value for insurers.
- Assess data quality, availability, and suitability for AI applications.
- Apply AI-supported approaches to underwriting risk assessment.
- Improve risk classification and underwriting decision-making.

- Use predictive analytics to identify potential claims outcomes and risk patterns.
- Apply AI to claims triage and prioritization.
- Identify suspicious claims and fraud indicators using advanced analytics.
- Improve claims processing through intelligent automation.
- Evaluate AI model performance, reliability, fairness, and explainability.
- Establish appropriate human review and escalation mechanisms.
- Identify and manage AI-related data, privacy, cybersecurity, and model risks.
- Develop performance measures for AI-powered insurance processes.
- Build business cases and prioritize AI implementation opportunities.
- Develop an integrated roadmap for deploying AI across underwriting and claims operations.

Course Outline

DAY 01

Artificial Intelligence in Insurance Underwriting and Claims

- Understanding artificial intelligence and its evolution in insurance.
- Strategic opportunities created by AI-powered insurance operations.
- AI applications across underwriting, claims, pricing, and fraud management.
- Traditional versus AI-enabled underwriting and claims processes.
- Insurance data sources and their role in AI decision-making.
- Identifying high-value and high-impact AI use cases.
- Assessing organizational and technological readiness.
- Key challenges and limitations of AI adoption.

PRACTICAL APPLICATION

Develop an AI use-case map for underwriting and claims and prioritize opportunities based on business value.

DAY 02

AI-Powered Underwriting and Risk Assessment

- Transforming traditional underwriting through artificial intelligence.
- Automated risk assessment and decision support.
- Customer and risk segmentation using data analytics.
- Predictive risk modeling and pattern recognition.
- AI-supported underwriting rules and recommendations.
- Using external and internal data to enhance risk assessment.
- AI applications in pricing and risk classification.
- Portfolio-level risk monitoring and emerging risk identification.
- Human oversight and escalation of complex underwriting decisions.

PRACTICAL APPLICATION

Design an AI-supported underwriting decision framework for a selected insurance product.

DAY 03

AI-Powered Claims Management and Processing

- Artificial intelligence across the claims lifecycle.
- Digital first notification of loss and intelligent intake.
- Automated document classification and information extraction.
- Claims triage, prioritization, and routing.
- Predictive claims assessment and outcome forecasting.
- Automated validation and decision support.
- AI-supported reserving and settlement prioritization.
- Customer communication and claims status automation.
- Managing complex claims requiring expert human intervention.

PRACTICAL APPLICATION

Design an AI-enabled claims workflow from first notification through assessment, routing, and settlement.

DAY 04

AI for Fraud Detection, Analytics and Decision Intelligence

- Using AI to identify suspicious claims and transactions.
- Anomaly detection and behavioral pattern analysis.
- Identifying relationships and recurring fraud patterns.
- Combining AI analytics with fraud investigation processes.
- Predictive indicators and claims risk scoring.
- Reducing false positives and improving detection accuracy.
- Integrating AI insights into underwriting and claims decisions.
- Data quality, privacy, and cybersecurity considerations.
- Model performance, explainability, fairness, and reliability.

PRACTICAL APPLICATION

Analyze a portfolio of claims and develop an AI-supported fraud and risk detection approach.

DAY 05

AI Governance, Implementation and Future-Ready Insurance Operations

- Developing an AI strategy for underwriting and claims.
- Prioritizing AI initiatives and developing business cases.
- Establishing AI governance and accountability.
- Managing model risk, data risk, privacy, and cybersecurity.
- Defining human oversight for high-impact insurance decisions.
- Developing AI performance indicators and value measurement.
- Managing implementation, organizational change, and user adoption.
- Monitoring model performance and managing model changes.
- Scaling successful AI solutions across insurance operations.

DAY 05 — CONTINUED

FINAL WORKSHOP

Develop an integrated AI implementation roadmap for underwriting and claims covering use cases, data requirements, technology, governance, human oversight, risk controls, performance indicators, implementation priorities, and expected business value.

Register or Request More Information

Course page: <https://quest-training.com/courses/ai-powered-insurance-claims-underwriting-training-course>

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