

Course No. 1895

Fraud Analytics for Insurance Training Course

**INSURANCE FRAUD & FINANCIAL CRIME
INSURANCE & RISK MANAGEMENT**

DURATION

5 Days

DELIVERY

Classroom



Course Overview

This advanced professional course provides a practical and analytical framework for detecting, assessing, and managing insurance fraud using data-driven techniques. It focuses on transforming insurance data into actionable fraud intelligence that enables organizations to identify suspicious patterns, prioritize investigations, reduce fraudulent losses, and strengthen fraud prevention across the insurance lifecycle.

The course explores how data from policies, underwriting, claims, customer interactions, payments, intermediaries, providers, and other relevant sources can be analyzed to identify anomalies and potential fraud indicators. Participants will learn how to combine business knowledge, risk indicators, statistical analysis, behavioral patterns, and investigative judgment to improve fraud detection and decision-making.

Particular attention is given to claims fraud analytics, anomaly detection, fraud scoring, rule-based detection, pattern analysis, network relationships, outlier identification, predictive indicators, and the development of fraud risk models. The course also addresses data quality, false positives, model effectiveness, investigation prioritization, and the governance of analytical fraud detection processes.

Through practical exercises, insurance fraud scenarios, analytical case studies, and a final workshop, participants will develop a structured fraud analytics framework capable of supporting early detection, investigation prioritization, loss prevention, management reporting, and continuous improvement of insurance fraud controls.

Objectives

- By the end of this course, participants will be able to:
- Analyze the role of data analytics in insurance fraud detection and prevention.
- Identify relevant insurance data sources and fraud-related data attributes.
- Detect unusual patterns, anomalies, and behavioral indicators associated with potential fraud.
- Apply statistical and analytical techniques to insurance fraud scenarios.
- Develop fraud indicators, detection rules, and risk-based scoring approaches.
- Analyze claims, policy, payment, customer, and intermediary data for suspicious relationships.

- Identify outliers and recurring patterns that may indicate fraudulent activity.
- Evaluate fraud detection results and distinguish meaningful signals from false positives.
- Prioritize suspicious cases according to fraud risk and potential financial impact.
- Design analytical dashboards and fraud monitoring indicators.
- Assess the effectiveness and limitations of fraud detection models.
- Strengthen data quality, governance, documentation, and analytical controls.
- Integrate fraud analytics with investigation, claims, underwriting, compliance, and risk functions.
- Develop actionable recommendations for fraud prevention and loss reduction.
- Establish a sustainable analytics-driven insurance fraud management framework.

Who Should Attend

This course is designed for insurance fraud analysts, fraud investigators, claims professionals, claims managers, underwriting specialists, risk managers, compliance officers, internal auditors, and professionals responsible for fraud detection, monitoring, and prevention.

It is also suitable for data analysts, business intelligence professionals, actuarial professionals, finance specialists, operations managers, technology professionals, and insurance professionals who work with policy, claims, customer, payment, or transactional data and want to apply analytical techniques to fraud risk management.

The course is particularly valuable for managers and decision makers seeking to strengthen data-driven fraud detection, improve investigation prioritization, reduce fraudulent claims and financial losses, enhance analytical capabilities, and establish stronger collaboration between business, control, and data functions.

Learning Outcomes

- Upon completion of the course, participants will be able to:
- Explain the principles and applications of fraud analytics in insurance.
- Identify and evaluate data sources relevant to insurance fraud detection.
- Prepare and assess insurance data for fraud analysis.
- Detect anomalies, outliers, unusual behaviors, and suspicious patterns.

- Develop meaningful fraud indicators and analytical rules.
- Apply risk-based fraud scoring and case prioritization.
- Analyze claims and policy relationships to identify suspicious behavior.
- Identify patterns involving customers, intermediaries, providers, transactions, and claims.
- Evaluate false positives and improve the quality of fraud alerts.
- Develop fraud monitoring dashboards and analytical reports.
- Assess the performance of fraud detection models and analytical approaches.
- Connect analytical findings with fraud investigation processes.
- Identify data quality and governance weaknesses affecting fraud analytics.
- Recommend preventive controls based on analytical findings.
- Communicate fraud intelligence effectively to management and investigation teams.
- Build an integrated analytics-driven framework for insurance fraud detection and prevention.

Course Outline

DAY 01

Foundations of Fraud Analytics in Insurance

- The role of analytics in modern insurance fraud management.
- Insurance fraud risks and the data-driven detection lifecycle.
- Types of insurance fraud and their analytical characteristics.
- Key data sources: policies, claims, payments, customers, intermediaries, and providers.
- Structuring insurance data for fraud analysis.
- Data quality, completeness, consistency, and reliability.
- Identifying fraud-related data attributes and indicators.
- Developing fraud hypotheses from business and operational knowledge.
- Establishing analytical objectives and fraud detection priorities.

PRACTICAL APPLICATION

Mapping insurance data sources and developing an initial fraud analytics framework.

DAY 02

Fraud Indicators, Anomaly Detection & Pattern Analysis

- Identifying behavioral, transactional, financial, and operational fraud indicators.
- Rule-based fraud detection techniques.
- Thresholds, exceptions, and unusual activity detection.
- Statistical analysis for identifying abnormal claims and transactions.
- Outlier identification and anomaly detection.
- Pattern analysis across claims and policies.
- Time-based trends and recurring fraud behavior.
- Comparing expected and observed insurance activity.
- Identifying suspicious combinations of indicators.

PRACTICAL APPLICATION

Analyzing a simulated claims dataset to identify anomalies and potential fraud indicators.

DAY 03

Fraud Scoring, Relationships & Predictive Analytics

- Developing insurance fraud risk scores.
- Risk-based prioritization of claims and suspicious cases.
- Weighting fraud indicators and evaluating risk factors.
- Customer, policy, claim, intermediary, and provider relationship analysis.
- Identifying connected parties and suspicious networks.
- Historical fraud patterns and behavioral profiling.
- Predictive indicators and early-warning mechanisms.
- Evaluating analytical models and detection performance.
- Managing false positives and false negatives.

PRACTICAL APPLICATION

Building a fraud scoring methodology and prioritizing a portfolio of suspicious insurance claims.

DAY 04

Fraud Monitoring, Investigation Integration & Management Reporting

- Designing continuous fraud analytics and monitoring processes.
- Developing fraud detection dashboards.
- Key fraud indicators and early-warning alerts.
- Linking analytical alerts with investigation workflows.
- Investigation prioritization based on analytical evidence.
- Data-driven claims review and referral processes.
- Measuring fraud detection effectiveness.
- Tracking prevented losses, identified fraud, and investigation outcomes.
- Reporting fraud intelligence to management and decision makers.

PRACTICAL APPLICATION

Designing a fraud monitoring dashboard and developing an investigation prioritization process.

DAY 05

Fraud Analytics Governance, Model Effectiveness & Continuous Improvement

- Governance of analytical fraud detection programs.
- Data governance and analytical accountability.
- Model validation, performance assessment, and limitations.
- Managing changes in fraud behavior and emerging fraud patterns.
- Root cause analysis of analytical and detection failures.
- Converting analytical findings into preventive controls.
- Integrating fraud analytics with risk, compliance, claims, underwriting, and investigation functions.
- Measuring return and operational value from fraud analytics.
- Building a continuous improvement cycle for fraud detection.

DAY 05 — CONTINUED

FINAL WORKSHOP

Developing an integrated Fraud Analytics Framework for an insurance company covering data sources, fraud indicators, anomaly detection, scoring, relationship analysis, monitoring, investigation prioritization, reporting, governance, and continuous improvement.

Register or Request More Information

Course page: <https://quest-training.com/courses/fraud-analytics-for-insurance-training-course>

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