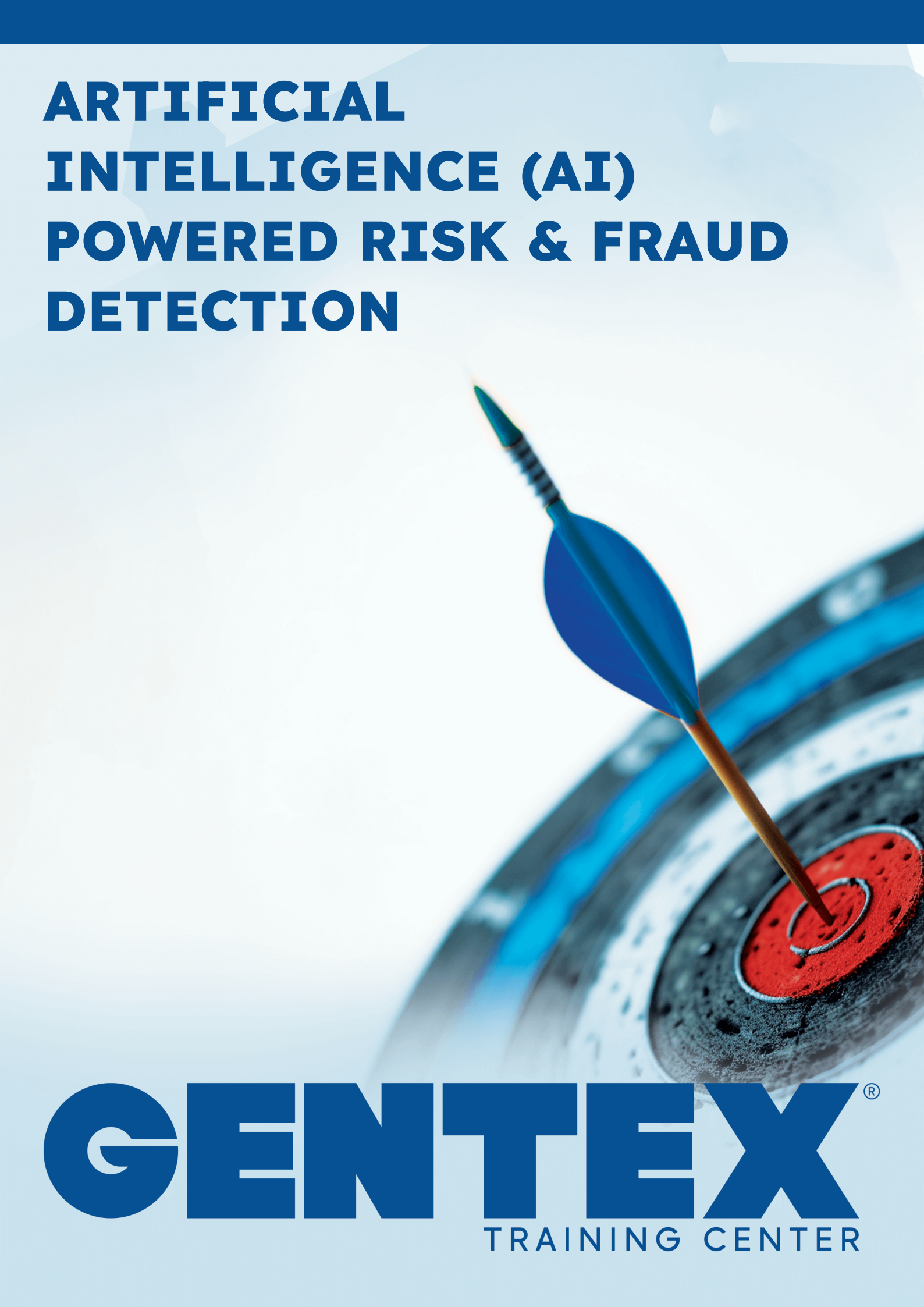
ARTIFICIAL INTELLIGENCE (AI) POWERED RISK & FRAUD DETECTION



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Info@gentextraining.com

Introduction

The Artificial Intelligence (AI) Powered Risk & Fraud Detection Training Course prepares risk, compliance, and analytics professionals to detect fraud with intelligent systems rather than manual review alone. Fraudsters adapt faster than static rules, and they exploit the gaps between systems. Artificial intelligence closes those gaps by learning normal behaviour and flagging genuine deviations at scale. This course covers fraud analytics, anomaly detection, network analysis, and decision automation. Furthermore, it applies model governance, explainability, and regulatory expectations. As a result, participants design detection systems that catch more, alert less, and stand up to scrutiny.

Artificial Intelligence (AI) Powered Risk & Fraud Detection Course Objectives

- Explain artificial intelligence and machine learning concepts in fraud detection.
- Apply data preparation and feature engineering to transaction and behavioural data.
- Build anomaly detection models for fraud and risk signals.
- Develop supervised classification models and rule-model hybrids.
- Apply network analysis and link detection across entities and accounts.
- Use natural language processing for documents, narratives, and communications.
- Apply image and document forensics for tampered evidence detection.
- Evaluate model performance using precision, recall, and cost-based metrics.
- Apply AI governance, explainability, and bias testing requirements.
- Design a phased AI fraud roadmap with monitoring and benefit tracking.

Course Methodology

- Interactive lectures with real fraud and financial crime case studies.

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- Model design and feature engineering workshops on transaction data.
- Anomaly detection and network analysis exercises.
- Alert triage and false positive reduction practice.
- Structured peer discussion with facilitator feedback on deployment decisions.

Who Should Take This Course

- Fraud and financial crime analytics teams.
- Risk managers covering fraud and conduct risk.
- Compliance and AML monitoring professionals.
- Data scientists and analysts in risk functions.
- Internal auditors reviewing detection controls.
- Investigation units and security operations staff.

Artificial Intelligence (AI) Powered Risk & Fraud Detection Course Outlines

Day 1: AI Foundations for Risk and Fraud

- Artificial intelligence, machine learning, and generative AI explained.
- Supervised, unsupervised, and reinforcement learning in detection work.
- Fraud and risk data sources, quality, and governance.
- Feature engineering for transaction, device, and behavioural data.
- The AI lifecycle: framing, data, modelling, deployment, monitoring.
- Detection use case landscape and prioritisation criteria.
- Case study: a detection programme that reduced fraud losses.

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Day 2: Anomaly Detection and Risk Signals

- Anomaly detection methods and unsupervised learning approaches.
- Statistical baselines and deviation scoring.
- Behavioural profiling and velocity checks.
- Device fingerprinting and digital signal analysis.
- Clustering for segmentation and outlier identification.
- Alert triage design and false positive reduction.
- Workshop: designing an anomaly detection model outline.

Day 3: Supervised Models and Rule-Model Hybrids

- Classification models for fraud and risk scoring.
- Rule engines and hybrid rule-model architectures.
- Feature importance, model interpretability, and scoring bands.
- Handling imbalanced datasets and rare events.
- Champion-challenger testing and controlled rollout.
- Model validation, backtesting, and drift monitoring.
- Workshop: building a fraud scoring model and rule set.

Day 4: Network, Text, and Document Analytics

- Network analysis and link detection across entities.
- Graph analytics for collusion and circular transaction patterns.
- Natural language processing for narratives and communications.
- Sentiment and inconsistency detection in documents.
- Document forensics and tampering detection techniques.

- Optical character recognition and intelligent document processing.
- Workshop: mapping detection analytics across a fraud scenario.

Day 5: Governance, Explainability, and Value Realisation

- AI governance frameworks for detection systems.
- Explainability, fairness, and bias testing methods.
- Data protection, consent, and regulatory expectations.
- MLOps, model monitoring, and production feedback loops.
- Building a detection roadmap with funding and decision gates.
- Benefit tracking: fraud loss, alert volume, investigation effort, and recovery.
- Course review, assessment, and action planning.

Conclusion

By successfully completing Artificial Intelligence (AI) Powered Risk & Fraud Detection, participants will gain a thorough understanding of detection data foundations, anomaly detection, supervised fraud models, network and document analytics, and AI governance. They will also acquire practical skills in data preparation, model design, alert triage, and benefit measurement. In addition, the course prepares them to scale AI detection responsibly across risk functions. Gentex Training Center delivers this programme with a strong focus on applied detection practice and measurable fraud reduction.

FAQs for Artificial Intelligence (AI) Powered Risk & Fraud Detection course

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Q1 What is the "Artificial Intelligence (AI) Powered Risk & Fraud Detection" course about?

It is a five-day programme on applying artificial intelligence to fraud and risk detection. It covers detection data foundations, anomaly detection and behavioural signals, supervised fraud scoring models, network, text and document analytics, alert triage, and AI governance for detection systems.

Q2 What are the key benefits of the "Artificial Intelligence (AI) Powered Risk & Fraud Detection" course?

Participants learn to target AI where detection returns are measurable, which avoids wasted pilots. The course reduces fraud losses and false positives, raises genuine alert capture rates, shortens investigation effort, improves evidence quality, and strengthens model governance so detection decisions withstand audit and regulatory review.

Q3 What skills will I gain from the "Artificial Intelligence (AI) Powered Risk & Fraud Detection" course?

Participants gain detection data preparation and feature engineering, anomaly detection and risk signal design, supervised fraud scoring and rule-model hybrid design, and network, text and document analytics with AI governance and benefit measurement. These four skills cover the practical path from detection data to governed AI deployment.

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Q4 What tools, methods, or standards are covered in the "Artificial Intelligence (AI) Powered Risk & Fraud Detection" course?

The course covers supervised, unsupervised and reinforcement learning, feature engineering for transaction, device and behavioural data, statistical baselines and deviation scoring, behavioural profiling and velocity checks, device fingerprinting, clustering and outlier identification, classification models for fraud scoring, rule engines and hybrid rule-model architectures, imbalanced dataset handling, champion-challenger testing, model validation and drift monitoring, network and graph analytics for collusion detection, natural language processing for narratives, sentiment and inconsistency detection, document forensics and tampering detection, optical character recognition, precision, recall and cost-based evaluation metrics, explainability and bias testing, MLOps and production monitoring, and data protection and consent requirements.

Q5 How is the "Artificial Intelligence (AI) Powered Risk & Fraud Detection" course applied in real-world practice?

Participants apply the methods to live transaction and risk data. They prepare training datasets, design anomaly and fraud scoring models, build detection rules, map network analytics, reduce false positives, and set monitoring dashboards for deployed models. Many leave with a prioritised detection roadmap and model design outlines ready for development.

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