

AI and Machine Learning for Payment Fraud Detection

COURSE OVERVIEW

This course integrates artificial intelligence into finance and provides a comprehensive framework for applying advanced technologies to strengthen payment security and reduce financial crime. The curriculum explores how artificial intelligence and machine learning models can identify suspicious patterns, detect anomalies in real time, and minimize fraud across digital payment channels. Through case studies, technical demonstrations, and practical exercises, participants will learn how to integrate AI-driven fraud detection systems into existing financial infrastructures, balancing innovation with compliance, security, and customer trust.

WHO SHOULD ATTEND?

This course is designed for fraud analysts, risk managers, payment system professionals, compliance officers, IT managers, data scientists, and fintech specialists who want to develop expertise in AI-powered fraud detection. It is also highly relevant for banking executives, cybersecurity professionals, and technology leaders responsible for safeguarding digital transactions and ensuring regulatory compliance in an evolving financial landscape. A basic understanding of Python, statistics, and machine learning is recommended to fully benefit from the technical modules of the course.

COURSE OUTCOMES

Delegates will gain the skills and knowledge to:

- Understand the landscape, impact, and evolving patterns of payment fraud in digital transactions.
- Apply AI and machine learning techniques (e.g., decision trees, neural networks, clustering) for fraud detection.
- Utilize anomaly detection and predictive analytics to identify suspicious activities.
- Integrate AI-driven fraud detection systems within banking and fintech platforms.
- Evaluate model performance using key metrics such as precision, recall, and ROC-AUC.
- Adhere to compliance, governance, and ethical standards in AI-based fraud prevention.

KEY COURSE HIGHLIGHTS

At the end of the course, you will understand;

- Foundations of AI and machine learning techniques in fraud detection.
- Real-time anomaly detection and risk scoring for payment transactions.
- Behavioural biometrics and pattern recognition for identifying fraud.
- Continuous learning models that adapt to new and evolving fraud tactics.
- Balancing fraud detection accuracy with minimizing false positives.
- Regulatory compliance and data privacy considerations in fraud prevention.
- Practical case studies and implementation of AI-driven fraud mitigation tools.

All our courses are dual-certificate courses. At the end of the training, the delegates will receive two certificates.

1. A GTC end-of-course certificate.
2. Continuing Professional Development (CPD) Certificate of completion with earned credits awarded.