Training Course on AI-Powered Risk and Fraud Detection

Professional Development Training Course Outline

Category	Artificial Intelligence And Block Chain	**Duration**	10 Days
Base Fee	$3,000 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

In today's hyper-digital world, businesses face unprecedented challenges from sophisticated fraud schemes and rapidly evolving risk factors. Our **AI-Powered Risk & Fraud Detection** training course delivers cutting-edge knowledge and hands-on skills to harness Artificial Intelligence, Machine Learning, and Predictive Analytics in identifying, analyzing, and mitigating financial fraud and organizational risks in real time. Designed for professionals across finance, banking, cybersecurity, and compliance sectors, this course empowers learners with tools to implement **automated fraud detection systems**, real-time alerts, and risk scoring engines.

Using state-of-the-art **AI technologies** like NLP, anomaly detection, neural networks, and behavioral biometrics, this program bridges theoretical knowledge with practical case studies. From **deep learning models** to fraud pattern recognition, participants will master **AI-driven decision-making frameworks**, enabling organizations to reduce false positives, enhance due diligence, and increase regulatory compliance.

Programme Curriculum

Training Course on AI-Powered Risk & Fraud Detection

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Course Objectives

1. Understand AI applications in fraud detection and risk management.
2. Implement machine learning algorithms for fraud prediction.
3. Build real-time fraud detection dashboards using AI tools.
4. Utilize anomaly detection for transaction monitoring.
5. Detect insider threats using behavioral biometrics.
6. Apply neural networks for fraud pattern recognition.
7. Design automated risk scoring systems.
8. Conduct forensic analytics with AI tools.
9. Leverage predictive modeling in financial risk assessment.
10. Integrate NLP for document and transaction analysis.
11. Minimize false positives through adaptive AI systems.
12. Ensure compliance with AI-driven regulatory reporting.
13. Develop ethical AI frameworks for risk governance.

Organizational Benefits

- Enhanced fraud detection accuracy and reduced operational losses
- Real-time monitoring and automated alert systems
- Scalable and adaptive AI systems for evolving threats
- Reduced compliance risks and increased regulatory readiness
- Data-driven decision-making and improved investigative efficiency

Target Audience

1. Risk Management Professionals
2. Financial Analysts
3. Compliance Officers
4. Fraud Investigators
5. Data Scientists
6. Cybersecurity Analysts
7. Auditors & Forensic Accountants
8. AI/ML Engineers in Fintech

Course Outline

1. Introduction to AI in Fraud Detection

- Overview of digital fraud landscape
- AI vs traditional fraud detection
- Key trends in financial fraud

- Importance of real-time analytics
- Regulatory environment overview

2. Machine Learning Fundamentals

- Supervised vs unsupervised learning
- Model selection and evaluation
- Feature engineering basics
- Overfitting and underfitting
- Model optimization techniques

3. Anomaly Detection Techniques

- Statistical anomaly detection
- Clustering-based detection
- Isolation forest algorithms
- Use of unsupervised learning
- Fraud detection use cases

4. Natural Language Processing in Compliance

- Text mining from financial documents
- Identifying suspicious communication
- NLP for KYC and AML
- Sentiment analysis for fraud cues
- Document classification with AI

5. Neural Networks in Fraud Detection

- Deep learning architecture basics
- Fraudulent pattern recognition
- Recurrent Neural Networks (RNN)
- Training neural nets for risk
- Use cases in banking

6. Behavioral Biometrics

- User authentication with AI
- Mouse movement & typing analysis
- Device fingerprinting
- Behavioral pattern monitoring
- Continuous identity verification

7. Predictive Modeling in Risk

- Building predictive risk models
- Regression vs classification in fraud
- Scenario-based risk modeling
- Forecasting financial fraud
- Evaluation metrics for predictions

8. Real-Time Fraud Detection Systems

- Event stream processing

- Setting up alert rules with AI
- Scalable fraud detection pipelines
- Integration with payment systems
- Real-time case studies

9. AI in Anti-Money Laundering (AML)

- Suspicious transaction identification
- Pattern recognition in money flows
- AI in customer risk profiling
- Case study: AI in AML compliance
- Regulatory frameworks & AI

10. Risk Scoring Engines

- Designing risk scoring systems
- Combining structured and unstructured data
- AI in credit and insurance risk
- Interpretable AI for risk decisions
- Deployment of scoring models

11. Fraud Case Study Analysis

- Real-world fraud scenarios
- Post-incident fraud analytics
- Deep dives into famous fraud cases
- Identifying fraud red flags
- Lessons learned from breaches

12. Ethics and Governance in AI

- Bias in AI risk models
- Data privacy and AI ethics
- Fairness in fraud detection
- Building explainable AI systems
- Ethical AI governance practices

13. Forensic Data Analytics

- Data sources and extraction
- Advanced analytics for investigations
- Timeline and link analysis
- Visualization of fraud networks
- Investigative reporting

14. Implementing AI Fraud Solutions

- AI solution life cycle
- Selecting the right tools and frameworks
- Deployment in enterprise environments
- Integrating with existing systems
- ROI and performance evaluation

15. Capstone Project & Certification

- Define a fraud problem statement
- Build and evaluate a fraud detection model
- Present findings and solution
- Receive expert feedback
- Certification of completion

Training Methodology

- Instructor-led interactive sessions
- Real-world case studies and simulations
- Hands-on labs using Python, TensorFlow, and Scikit-learn
- Group activities and peer discussions
- Quizzes, assignments, and capstone project

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org **or call** *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	04 Dec 2026	Online	$2,000
23 Nov 2026	04 Dec 2026	Physical	$3,000
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$9,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$12,000

Ready to enroll or request a customized program? Book online or contact us:

Register Online Now

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