

ML for Finance: ARIMA Forecasting & Fraud Detection

Learn to apply machine learning to finance, from exploratory analysis and fraud detection to ARIMA forecasting and predictive model building in Python.

2.5 Hours

DURATION

5

MODULES

16

TOPICS

COURSE OVERVIEW

This beginner-friendly course provides a focused introduction to Machine Learning (ML) for finance operations. The course introduces key Machine Learning models used in finance operations, including exploratory data analysis, supervised learning models for prediction and classification, and unsupervised techniques such as clustering and anomaly detection for fraud analysis. Special emphasis is placed on predictive modeling and time series forecasting methods, showcasing their application in financial operations with practical case studies, such as stock price prediction and operational forecasting. The session includes a hands-on demonstration where learners will build and evaluate a predictive ML model using Python in Jupyter Notebook, providing real-world relevance. The course wraps up with an interactive Q&A session, highlighting career opportunities and real-world use cases of AI and ML in finance operations, empowering participants with actionable knowledge and skills.

WHO THIS COURSE IS FOR

Finance Analysts

Data Analysts

Financial Operations Staff

Fraud Analysts

Aspiring Data Scientists

LEARNING OBJECTIVES

- Explain the evolution and types of AI used in finance
- Describe supervised learning models for regression and classification
- Apply unsupervised learning techniques for clustering and anomaly detection
- Identify fraud and outliers using anomaly detection methods
- Analyse time series models such as Moving Average, ARIMA and LSTM
- Interpret stock price prediction case studies
- Build a linear regression model for financial forecasting
- Evaluate predictive models using RMSE and R-squared metrics

5 Modules, 16 Topics

01

Introduction to AI & ML in Finance

TOPICS

Evolution of AI in Finance · Traditional Finance vs. AI-driven Finance · Key Milestones in AI for Financial Services · **Types of AI:** Narrow AI, General AI, AGI

02

Types of Machine Learning and Their Role in Finance

TOPICS

- Exploratory Data Analysis
- **Supervised Learning:** Regression & Classification Models
- **Unsupervised Learning:** Clustering & Anomaly Detection
- Fraud Detection & Outlier Analysis

03

Predictive Modeling & Time Series Forecasting

TOPICS

- Introduction to Financial Forecasting
- **Time Series Models:** Moving Average, ARIMA, LSTM
- **Case Study:** Stock Price Prediction

04

Project: Hands-on Predictive ML Model Building Demo

LINEAR REGRESSION FOR FINANCIAL FORECASTING

Predicting Future Stock Prices

Model Evaluation: RMSE & R-squared Metrics · Live Python Code Demo using Jupyter Notebook

05

20 minutes

Q&A & Closing Discussion

TOPICS

Open Discussion on Real-World Applications · Career Opportunities in AI & ML for Finance

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

FLEXIBLE DELIVERY

Learn the Way That Suits You

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Live Online Classes (ILO)

Fly-Me-A-Trainer (FMAT)

Flexi (Self-Paced)

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✉ info@koenig-solutions.com