Forecasting with AI Training Course

Professional Development Training Course Outline

Category	Logistics and Supply Chain Management	**Duration**	10 Days
Base Fee	$3,000 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Forecasting with AI Training Course provides an in-depth exploration of advanced artificial intelligence techniques for predictive analytics and data-driven decision-making. As organizations face increasing volumes of complex data, leveraging AI for accurate forecasting has become essential to optimize operational efficiency, enhance strategic planning, and drive competitive advantage. Participants will gain hands-on experience with AI tools, machine learning algorithms, and real-world data sets to transform historical data into actionable insights. This course combines theoretical foundations with practical applications, ensuring participants can immediately apply forecasting techniques to real business scenarios.

In this course, learners will explore a wide range of AI forecasting methodologies including time series analysis, regression models, deep learning, and automated predictive modeling. Emphasis is placed on integrating AI forecasting solutions into organizational processes to improve resource allocation, risk management, and market responsiveness. Through interactive exercises, case studies, and collaborative problem-solving, participants will develop the analytical skills and strategic mindset necessary to lead AI-driven forecasting initiatives. This course is designed for professionals seeking to enhance data literacy and harness the power of AI for accurate, scalable, and dynamic forecasting.

Programme Curriculum

Forecasting with AI Training Course

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Course Objectives

1. Understand the fundamentals of AI-driven forecasting and predictive analytics.
2. Apply time series analysis techniques to real-world business data.
3. Utilize machine learning models to improve forecast accuracy.
4. Integrate AI tools into organizational decision-making processes.
5. Interpret forecasting outputs for strategic business planning.
6. Evaluate data quality and implement effective preprocessing techniques.
7. Design predictive models using Python and R.
8. Leverage automated AI forecasting platforms for efficiency.
9. Implement deep learning methods for complex forecasting scenarios.
10. Analyze risk and uncertainty in forecasts using AI models.
11. Optimize supply chain and financial planning with AI predictions.
12. Develop dashboards for visualizing forecast outcomes.
13. Conduct performance evaluation and model improvement strategies.

Organizational Benefits

- Enhanced data-driven decision-making
- Improved forecast accuracy and operational efficiency
- Reduced risks in business planning
- Faster identification of market trends
- Optimization of supply chain and resource allocation
- Better strategic planning and scenario analysis
- Increased agility in response to business changes
- Scalable predictive modeling solutions
- Improved ROI on data initiatives
- Empowered workforce with AI analytics skills

Target Audiences

1. Data Analysts
2. Business Intelligence Managers

3. Financial Planners
4. Operations Managers
5. Supply Chain Professionals
6. IT Professionals
7. Marketing Analysts
8. Strategic Planners

Course Duration: 10 days

Course Modules

Module 1: Introduction to AI Forecasting

- Overview of AI in forecasting
- Importance of predictive analytics
- Key forecasting concepts and metrics
- AI vs traditional forecasting methods
- Case Study: Forecasting retail demand

Module 2: Data Preparation for Forecasting

- Data cleaning and preprocessing
- Handling missing values
- Feature engineering techniques
- Data normalization and transformation
- Case Study: Financial data preprocessing

Module 3: Time Series Analysis

- Components of time series data
- Seasonal, trend, and cyclical patterns
- Autocorrelation and stationarity
- ARIMA models for forecasting
- Case Study: Sales data trend analysis

Module 4: Machine Learning Models for Forecasting

- Regression models for prediction
- Decision trees and ensemble methods
- Support vector machines
- Model selection and evaluation
- Case Study: Energy consumption forecasting

Module 5: Deep Learning for Forecasting

- Introduction to neural networks
- LSTM and RNN architectures
- Handling sequential data
- Model training and validation
- Case Study: Stock price prediction

Module 6: Automated AI Forecasting Platforms

- Overview of AI forecasting software
- Configuring automated workflows
- Integrating AI platforms into business processes
- Monitoring model performance
- Case Study: Automated demand planning

Module 7: Forecast Evaluation and Accuracy

- Metrics for forecast accuracy (MAE, RMSE)
- Cross-validation techniques
- Model tuning and optimization
- Scenario testing and simulation
- Case Study: Predictive model evaluation

Module 8: AI Forecasting in Supply Chain

- Demand forecasting for inventory management
- Optimizing procurement and logistics
- Risk analysis in supply chain forecasts
- AI-driven inventory optimization
- Case Study: Global supply chain forecasting

Module 9: Financial Forecasting with AI

- Revenue and expense forecasting
- Cash flow predictions
- Risk-adjusted forecast models
- Integrating forecasts into budgeting
- Case Study: Corporate financial planning

Module 10: Marketing Forecasting Using AI

- Predicting customer demand
- Market trend analysis
- Sales and campaign forecasting
- Consumer behavior modeling
- Case Study: Product launch prediction

Module 11: Dashboarding and Visualization

- Visualizing forecast outputs
- KPI tracking dashboards
- Tools for dynamic reporting
- Communicating insights to stakeholders
- Case Study: Executive dashboard development

Module 12: Forecasting for Risk Management

- Identifying uncertainties
- Stress testing predictive models
- Scenario planning using AI
- Risk mitigation strategies
- Case Study: Risk-based scenario forecasting

Module 13: Ethics and Compliance in AI Forecasting

- Data privacy and security considerations
- Regulatory compliance
- Bias detection in AI models
- Ethical implications of AI forecasts
- Case Study: Ethical AI implementation

Module 14: Advanced Forecasting Techniques

- Hybrid models combining ML and statistical methods
- Ensemble learning approaches
- Real-time forecasting applications
- Improving model robustness
- Case Study: High-frequency trading forecasts

Module 15: Capstone Project and Case Study Integration

- End-to-end forecasting project
- Data collection, model building, evaluation
- Integration of multiple AI techniques
- Presentation of forecasting results
- Case Study: Multinational sales forecast

Training Methodology

- Interactive lectures and live demonstrations
- Hands-on exercises using Python, R, and AI platforms
- Real-world case study analyses
- Group discussions and collaborative problem-solving
- Scenario-based simulations
- Capstone project integrating all modules

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

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