



Advanced Analytics for Finance

 **Details:**

- 5 Sessions
- 10 Modules
- 15 Hours

CONTACT US



100 Creek St., Brisbane City,
QLD 4000, Australia



info@soofastaei-educations.com



www.soofastaei-educations.com



0061 422 125 935

PROGRAM OVERVIEW

Artificial intelligence (AI) and advanced analytics change the way financial institutions interact with their customers and run their organizations. These institutions know that advanced analytics has the potential to inform business strategy and improve operational performance. The ability to structure, manipulate, interpret, and extract insights from data is central to an organization's survival. Data Analytics methods, can be used to automate and optimize financial decisions, according to methods that are already used in the area. However, it is also possible, when using advanced analytics techniques, to incorporate machine learning and AI algorithms to develop predictions in an innovative and yet unexplored way in the market: this is what will generate a great competitive advantage for companies in the financial market.

Hence there is a growing demand for professionals specializing in data analytics in the field of financial services. The role of a data analyst is dynamic, complex, and driven by various skills. These skills range from a basic understanding of financial statement data and non-financial metrics linked to financial performance to a deeper dive into business and financial modelling.

This course introduces an overview of financial data analytics. You will learn why, when, and how to apply financial data analytics in real-world situations. You will explore techniques to analyse your business-derived data and evaluate the risk-reward trade-off expounded in modern theories. While most of the focus will be on the prices, returns, and risk of corporate stocks, the analytical techniques can be leveraged in other domains. This multifaceted specialization will equip the people interested in entering the dynamic world of data and business analysis and gaining more profound technical knowledge in Finance and Quantitative Modelling.

This course equips you with data analysis skills in short supply and can be utilized in algorithmic trading, machine learning, and AI applications. You will develop core finance, investments, and data analytics skills as you study. You will also be taught how to analyse data and get a thorough understanding of core financial theory and investment practices.



KEY BENEFITS

The Program is aimed at providing:

- ✔ Gain a deep understanding of financial services' theories;
- ✔ Develop knowledge and skills in analyzing data to inform investment decisions;
- ✔ Identify where and how to apply advanced data analytics;
- ✔ Familiar with the business problems with the data-driven decision-making process;
- ✔ Explanation of how data is used for performance evaluation;

- ✔ Describe ARIMA, SARIMAX, RNN, LSTM, etc;
- ✔ Offering forward-looking strategic insights based on accurate and detailed forecasts, rather than traditional historical financial reporting;
- ✔ Mitigating risk by using facts to make important business decisions with more confidence;
- ✔ Reducing costs while making more productive.

WHO SHOULD ATTEND THIS PROGRAM?

Executives, managers and analysts in the finance, investment, insurance and reinsurance industries, accountants, investors, IT professionals and data scientists who want to understand how analytics is utilized in their businesses.

Agenda

SESSION 1

Module 1: Introduction

- Course Overview and Objectives
- Introduction Data Analytics
- Statistical Analysis and Data Analytics for finance
- Contemporary issues and development of data analytics
- Applications of data analytics in finance and investment

Module 2: Principles, Applications & Risks

- Understanding Key Financial Statements
- Financial Analysis Techniques
- Financial Statement Analysis
- Corporate Finance
- Principles of Risks Analysis and Financial Risk Management
- Analysis of Financial Risks
- Market Risks
- Credit Risks
- Operational Risks
- Integrated Risk Management
- Quantitative Asset Allocation and Portfolio Risk Management

SESSION 2

Module 3: Data science

- Data Basics
- Types of Data
- Big Data
- Databases and Other Tools
- Data Process (Crisp-DM)
- Business Understanding
- Data Understanding
- Data Preparation
- How Much Data Do You Need?
- Examples of Data Science in Finance

Module 4: Machine Learning

- What Is Machine Learning?
- The Machine Learning Process
- Applying Algorithms
- Supervised Learning
- Unsupervised Learning
- Reinforcement Learning
- Semi-supervised Learning
- Common Types of Machine Learning Algorithms
- Naïve Bayes Classifier
- K-Nearest Neighbor
- Linear Regression

- Decision Tree
- Ensemble Modelling
- K-Means Clustering
- Genetic Algorithm

SESSION 3

Module 5: Deep Learning

- What Is Deep Learning
- Difference Between Deep Learning and Machine Learning
- Artificial Neural Networks (ANNs)
- Recurrent Neural Network
- Convolutional Neural Network (CNN)

- Generative Adversarial Networks (GANs)
- Deep Learning Use Cases
- Deep Learning Hardware
- When to Use Deep Learning?

Module 6: Financial Analytics Services

- Forecasting in Practice
- Subjective Forecasting
- Business Forecasting and Time Series Data
- Introduction to Financial Analytics
- Forecasting Performance Measurements: Distance
- Forecasting Performance Measurements: Metrics

SESSION 4

Module 7: Performance Measurement

- Introduction to Forecasting
- Average Method
- Naive Method
- Linear Regression
- Moving Averages
- Exponential Smoothing
- Simple Exponential Smoothing
- Holt's Exponential Smoothing
- Holt-Winter's Forecasting Model
- Autoregression
- Examples

Module 8: Analytics Models

- Stationarity
- ARIMA
- SARIMAX
- RNN
- LSTM



SESSION 5

Module 9: Modern Financial Services

Portfolios in Practice

- Introduction
- Expected Returns

- Risk of a Security
- Efficient Frontier
- Portfolio Weights
- Capital Allocation Line
- Diversification
- Introduction to Algorithmic Trading
- Trend Following Strategy
- Backtesting
- Example

Conclusion

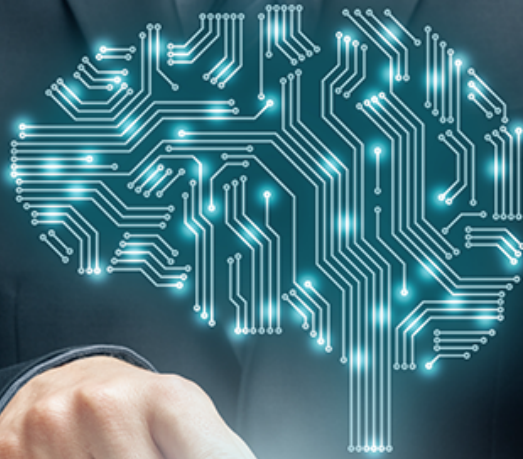
Module 10: The application of data science in financial services

- Fraud Prevention
- Risk Management
- Credit Allocation
- Customer Analytics
- Algorithmic Trading






SOOFASTAEI
EDUCATIONS



CONTACT US

 info@soofastaei-educations.com

 0061 422 125 935

 www.soofastaei-educations.com

 100 Creek St., Brisbane
City, QLD 4000, Australia

Soofastaei-Educations is an influential global training organization that delivers specialized world-class short- and long-term educational programs.

This organization is a part of Soofastaei Institute, which provides technical business solutions, publications, and educational services in the field of advanced applied analytics and AI in different for different industries.

The Soofastaei Educations works directly with the prestigious universities and giant industrial companies to train the new generation of students and experts for the digitalized future industries.



SOOFASTAEI
EDUCATIONS