

Data Science & AI: Python, ML & TensorFlow

Learn to apply Python, statistics, machine learning and TensorFlow to turn data into business decisions.

5 Days

DURATION

11

MODULES

45

TOPICS

COURSE OVERVIEW

This course introduces data science and AI concepts, including knowledge representation, value creation and the AI ecosystem, before covering the data science workflow from data preparation through model building to deployment. It examines data science technologies such as Python and its integration with Spark, along with AI's role in business and ethics. It then addresses data sources, statistical analysis, machine learning problems such as classification, clustering and recommendation engines, and deep learning with TensorFlow. The course closes with natural language processing, data visualization with Python, and communicating data-driven insights for decision making.

WHO THIS COURSE IS FOR

Data Scientists**Business Analysts****Machine Learning Engineers****AI Practitioners****Data Analysts**

LEARNING OBJECTIVES

- Explain core data science and AI concepts and ecosystem
- Describe the data science workflow from preparation to deployment
- Identify data science technologies including Python and Spark
- Assess AI's role and ethics in business
- Compare SQL and NoSQL data sources and storage
- Apply statistical modelling techniques using Python
- Analyse machine learning problems such as classification and clustering
- Develop deep learning solutions using TensorFlow

11 Modules, 45 Topics

01

Introduction to Data Science/AI

TOPICS

Knowledge acquisition through data · Knowledge representation · Value creation · Data Science overview · AI ecosystem and new approach to analytics · Key technologies

02

Data Science Workflow

TOPICS

Crisp-dm · Data preparation · Model planning · Model building · Communication · Deployment

03

Data Science Technologies

TOPICS

Languages used for prototyping · Big Data technologies · End to end solutions to common problems · Introduction to Python language · Integrating Python with Spark

04

AI in Business

TOPICS

AI ecosystem · Ethics of AI · How to drive AI in business

05

Data Sources

TOPICS

Types of data · SQL vs NoSQL · Data Storage · Data preparation

06

Data Analysis - Statistical Approach

TOPICS

Probability · Statistics · Statistical modeling · Applications in business using Python

07

Machine Learning in Business

TOPICS

Supervised vs unsupervised · Forecasting problems · Classification problems · Clustering problems · Anomaly detection · Recommendation engines · Association pattern mining · Solving ML problems with Python language

08

Deep Learning

TOPICS

- Problems where traditional ML algorithms fails
- Solving complicated problems with Deep Learning
- Introduction to Tensorflow

09

Natural Language Processing

10

Data Visualization

TOPICS

Visual reporting outcomes from modeling ·
Common pitfalls in visualization · Data visualization
with Python

11

From Data to Decision - Communication

TOPICS

Making impact: data driven story telling · Influence
effectiveness · Managing Data Science projects

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

Classroom Training

Live Online Classes (ILO)

Fly-Me-A-Trainer (FMAT)

Flexi (Self-Paced)

1-on-1 Training

Ready to Get Started?

Talk to a learning advisor about schedules, group training and customised delivery.

Visit koenig-solutions.com

✉ info@koenig-solutions.com