



ARTIFICIAL INTELLIGENCE · COURSE CURRICULUM

AIX Engineer Program

A structured, hands-on journey from Python and data foundations to deep learning, applied AI, and a complete real-world project you can showcase — with live mentorship and 1:1 support.

8-10 Weeks

24 Modules

25 Core Topics

Beginner → **Advanced**

Live + **1:1** Mentorship

Certificate Included

Program Structure

Six phases · 25 core topics · building from fundamentals to a deployable capstone project.

01 Foundations of AI & Data

Get grounded in AI thinking, Python and data.

Topics 1-4

- 1 Overview of AI and its fundamental concepts using Python
- 2 The various domains where AI is applied today
- 3 Different data types and the significance of clean, reliable data
- 4 Core statistical principles for AI — mean, variance, probability

02 Core Machine Learning

The essential ML algorithms every AI engineer needs.

Topics 5-11

- 5 Introduction to machine learning and its primary categories
- 6 Linear regression for predictive modelling
- 7 Logistic regression for classification problems
- 8 Structure and functioning of decision tree algorithms
- 9 Ensemble learning with Random Forest models
- 10 Key performance metrics for evaluating ML models
- 11 Techniques for transforming and selecting useful features

03 Unsupervised Learning

Find patterns and simplify complex data.

Topics 12-13

- 12 Clustering methods — K-Means and hierarchical clustering
- 13 Dimensionality reduction with methods like PCA

04 Deep Learning

Neural networks that power modern AI.

Topics 14-18

- 14 Foundations of neural networks and activation functions
- 15 How deep learning models learn — backpropagation & optimization
- 16 CNNs and their role in image analysis
- 17 RNNs and LSTMs for sequential data
- 18 Methods to prevent overfitting in ML models

05 Applied AI Specializations

Language, vision, forecasting and agents.

Topics 19-22

19 Fundamentals of Natural Language Processing (NLP)

20 Basics of computer vision and image-based AI systems

21 Forecasting and time-series modelling

22 Reinforcement learning and agent-based systems

06 Build, Ship & Responsible AI

Turn skills into a real, deployable project.

Topics 23-25

23 The steps involved in developing an AI project

24 Ethics, fairness and data privacy in AI

25 Capstone — a complete AI project from start to finish

You finish with a complete, deployable AI project — plus a portfolio, certificate & interview preparation.

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