



Applied AI & Data Science Diploma

The most complete path to becoming a data analyst, data scientist or AI developer.

Diploma | B11

Level: Advanced

Study load: 624 hours



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DATA ACADEMY

WHAT YOU'LL LEARN

- Apply Python, SQL, and modern AI frameworks to real-world data problems.
- Build and deploy machine learning and deep learning models.
- Design end-to-end data pipelines and analytical workflows.
- Evaluate AI systems for reliability, bias, and ethical considerations.
- Communicate data insights to technical and non-technical audiences.



TARGET AUDIENCE

Who is this for

Working professionals from any background who want to build a career in data or AI.

Prerequisites

Secondary education or equivalent work experience is sufficient. Secondary-school statistics (mean, variance, correlation). Prompting basics and some practical experience with prompting. Python (functions, classes, pip). Familiarity with a terminal and Git. Logical thinking.

Roles after

Data Analyst · Data Scientist · AI Developer

CURRICULUM

A01 — Data Fundamentals Course

Build your foundation in data: the landscape, the tools and the statistics behind every data role.

A13 — Data Storytelling Course

Make your data impossible to ignore.

A10 — Microsoft Excel Essentials Course

Work faster, smarter, and more confidently with Excel.

A04 — Data Visualization with Power BI Course

Turn raw data into interactive dashboards that drive decisions.

A51 — Final Assignment: Data Analytics

Capstone: a complete analytics project, from raw data to dashboard and data story.

A06 — Programming with Python Course

Learn Python the way data professionals actually use it.

A05 — Machine Learning with Python Course

Build, train and deploy machine learning models that solve real problems.

A16 — Deep Learning with Python Course

Build neural networks that see, understand, and predict.

A52 — Final Assignment: Data Science

Capstone: design and deliver a complete data science project, from data to model and evaluation.

A25 — SQL Foundations Course

Query any database with confidence — and get the answers you need.

CURRICULUM (CONTINUED)

A15 — Fundamentals of a Data Stack Course

Build the modern data infrastructure that powers data-driven companies.

A14 — Azure Data Fundamentals Course

Master cloud data — and get certified.

A53 — Final Assignment: Data Engineering

Capstone: build a working end-to-end data pipeline.

A03 — AI Fundamentals Course

The foundation course for every AI professional: understand AI, generative AI and prompting.

A24 — AI Literacy & Ethics Course

Understand AI deeply enough to lead — and question — it.

A29 — Vibe Coding with Lovable Course

Build working apps with AI — no coding experience required.

A02 — Building AI Agents Course

Automate complex workflows with AI — no deep coding required.

A26 — Retrieval-Augmented Generation (RAG) Course

Build AI that answers from your own knowledge base — accurately.

A54 — Final Assignment: Applied AI

Capstone: apply AI agents, vibe coding and RAG to a real, practical AI project.

A17 — Engineering AI Solutions on Azure Course

Design, train, and deploy AI on the world's leading cloud platform.



CURRICULUM (CONTINUED)

A27 — Building AI Agents with LangChain Course

Build production LLM applications — from chains to RAG pipelines and agents.

A30 — Programming with AI (Claude Code) Course

Direct Claude Code to build, test and ship real software.

A55 — Final Assignment: AI Engineering

Capstone: deliver a production-worthy generative AI application end-to-end.



ASSESSMENT FRAMEWORK

- Assessment is competency-driven and rubric-based (NLQF level 6), with an independent examiner for every module.
- What you'll be assessed on:
 - A51 — Final Assignment: Data Analytics
 - A52 — Final Assignment: Data Science
 - A53 — Final Assignment: Data Engineering
 - A54 — Final Assignment: Applied AI
 - A55 — Final Assignment: AI Engineering
- Full method, rubrics and resit procedure:
amsterdamdataacademy.com/examination-regulations





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AFTER THIS BOOTCAMP

You'll have covered the full path from data analytics and data science to data engineering and AI engineering, with a capstone project in every track and an NLQF level 6 diploma.

OFFICIAL CERTIFICATE

After completing the Applied AI & Data Science Diploma you receive an official ADA Diploma. This bootcamp is part of ADA's NLQF level 6 accredited programme — the nationally recognised qualification framework equivalent to a bachelor's degree — recognised by employers across the Netherlands.

Ready for your next step?

Book a free study-advice call

amsterdamdataacademy.com/get-study-advice

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