

Course Name	Data Analyst Launchpad — Zero to Hired
Duration	6 Months Total Programme
Technical Training	3 Months (Months 1-3) • 3 Sessions Per Week • 36 Sessions
Session Length	90 Minutes Each
Level	Complete Beginner → Job Ready
Internship	Starts Month 4 • With Mentor Support • 6-Month Experience Certificate
Placement Support	Starts Month 6
Alumni Access	Lifetime — after programme completion
Website	www.cadetx.co.uk

Month	Focus	Schedule
Month 1	Foundations — Data, Excel, GitHub, Python Basics	3 sessions/week • Sessions 1-12
Month 2	Core Technical — Python, Data Cleaning, SQL, Statistics	3 sessions/week • Sessions 13-24
Month 3	Advanced Analytics — EDA, Power BI, Business Analytics, ML, AI & Ethics	3 sessions/week • Sessions 25-36
Month 4 onwards	Internship — Real Projects with Mentor Support	Weekly mentor guidance + project work
Month 6	Placement Support Activated	Applications, referrals & interviews

PHASE 1: FOUNDATIONS • Sessions 1-7 • 10.5 Hours

Data Fundamentals (Sessions 1-2)

SESSION 1 Data Fundamentals

- What is data? Types of data
- Structured vs unstructured data
- Databases vs spreadsheets
- How companies store data — SQL, cloud, warehouses
- Introduction to data pipelines
- APIs, CSVs, JSON, web data
- Real business data examples

SESSION 2 Introduction to Data & Analytics

- What is data analysis and why it matters in business
- The difference between data analysis and data science
- Types of analytics — Descriptive, Diagnostic, Predictive, Prescriptive
- The analyst mindset — asking the right questions before touching data
- How businesses structure their data teams
- How analysts collaborate with stakeholders, engineers, and leadership
- Translating business problems into data questions
- Case studies from real businesses — how data drove a key decision
- What a typical day looks like for a data analyst

Excel for Data Analysis (Sessions 3-5)

SESSION 3 Excel Part 1 — Core Formulas & Lookups

- Core formulas — SUMIF, SUMIFS, COUNTIF, COUNTIFS
- Logical functions — IF, IFS, nested IF
- Text functions — LEFT, RIGHT, MID, TRIM, CONCATENATE
- Date functions — TODAY, YEAR, MONTH, DATEDIF
- Lookup functions — VLOOKUP, XLOOKUP, INDEX-MATCH

SESSION 4 Excel Part 2 — Data Analysis & Visualisation

- Pivot tables and pivot charts
- Data cleaning tools — Remove Duplicates, Text to Columns, Flash Fill
- Conditional formatting
- Data validation
- Sorting and filtering
- Named ranges

SESSION 5 Excel Part 3 — Dashboards & Real-World Tasks

- Building a complete Excel dashboard
- KPI cards and summary views
- Slicers and interactive filtering
- Excel Tables — structured references
- Real-world Excel analysis tasks
- Connecting Excel to business reporting
- Excel keyboard shortcuts for analysts

Git & GitHub for Data Analysts (Sessions 6–7)

SESSION 6 Git & GitHub Part 1 — Basics

- What is version control and why analysts need it
- Installing Git and setting up GitHub
- SSH key setup
- Core commands — init, add, commit, push, pull, clone
- Creating and managing repositories
- Branching basics

SESSION 7 Git & GitHub Part 2 — Portfolio & Collaboration

- Writing good commit messages and README files
- Uploading Python notebooks, SQL scripts, and dashboards to GitHub
- Structuring a professional data portfolio on GitHub
- Collaborating on shared projects using GitHub
- .gitignore for data projects
- Real-world use — how data teams use Git in the workplace

PHASE 2: CORE TECHNICAL SKILLS • Sessions 8–18 • 16.5 Hours

Python Fundamentals (Sessions 8–11)

SESSION 8 Python Part 1 — Language Basics

- Installing Python and Jupyter Notebook / Google Colab
- Variables and data types
- Type conversion
- Input and output
- Arithmetic operators
- String operations
- Comments and code readability

SESSION 9 Python Part 2 — Control Flow

- Comparison operators
- Logical operators
- If, elif, else
- For loops
- While loops
- Nested loops
- Break, continue, pass
- List comprehensions

SESSION 10 Python Part 3 — Functions & Modules

- Defining and calling functions
- Parameters and return values
- Default arguments

- Scope — local vs global
- Lambda functions
- Modules and packages
- Common built-in modules — math, random, datetime, os
- Writing clean, reusable code

SESSION 11 Python Part 4 — Working With Data

- Reading CSV and Excel files
- Introduction to Pandas and NumPy
- Series and DataFrames
- Basic data selection and filtering
- F-strings and string formatting
- Error handling — try/except
- Basic visualisation with Matplotlib

Data Cleaning with Pandas (Sessions 12–13)

SESSION 12 Data Cleaning Part 1 — Techniques

- Importing datasets
- Handling missing values
- Fixing inconsistent data
- Removing duplicates
- String cleaning
- Date and time cleaning

SESSION 13 Data Cleaning Part 2 — Real-World Cleaning

- Outlier detection
- Creating analysis-ready datasets
- Real messy datasets from business scenarios
- Documenting cleaning steps
- Exporting clean data

SQL for Data Analysis (Sessions 14–16)

SESSION 14 SQL Part 1 — Foundations

- SELECT, WHERE, ORDER BY
- Filtering and sorting
- DISTINCT and aliases
- Basic aggregations — COUNT, SUM, AVG, MAX, MIN
- GROUP BY

SESSION 15 SQL Part 2 — Intermediate SQL

- JOINS — INNER, LEFT, RIGHT, FULL
- Subqueries
- CTEs — Common Table Expressions
- CASE statements
- Date functions and filtering by date ranges

SESSION 16 SQL Part 3 — Advanced SQL

- Window functions — ROW_NUMBER, RANK, LAG, LEAD
- Views and stored procedures
- Writing efficient SQL
- Real business SQL case studies
- SQL in Python — SQLAlchemy, pandas read_sql

Statistics for Data Analysis (Sessions 17–18)

SESSION 17 Statistics Part 1 — Descriptive Statistics

- Mean, median, mode
- Variance and standard deviation
- Probability basics
- Correlation vs causation

- Normal distribution
- Sampling and confidence intervals

SESSION 18 Statistics Part 2 — Inferential Statistics & Testing

- Hypothesis testing — t-test, chi-square
- A/B testing and statistical significance
- p-value and significance level
- Type I and Type II errors
- Business-focused examples

PHASE 3: ADVANCED ANALYTICS • Sessions 19–36 • 27 Hours

Exploratory Data Analysis (Sessions 19–20)

SESSION 19 EDA Part 1 — Foundations

- Understanding dataset structure
- Identifying patterns, trends, anomalies
- Summary statistics
- Univariate and bivariate analysis
- Asking the right business questions

SESSION 20 EDA Part 2 — Visual EDA

- Visual EDA using Python — Matplotlib, Seaborn, Plotly
- Correlation matrix and heatmaps
- Distribution analysis
- Outlier visualisation
- EDA on real datasets
- EDA report structure

Data Visualisation — Power BI (Sessions 21–27)

SESSION 21 Power BI Part 1 — Desktop Basics

- Interface and workspace
- Importing data — Excel, CSV, SQL, web
- Navigator and query editor overview
- Data types and formatting

SESSION 22 Power BI Part 2 — Power Query

- Cleaning data in Power Query
- Merging and appending queries
- Splitting and combining columns
- Data type conversions
- Removing errors and duplicates
- Creating custom columns

SESSION 23 Power BI Part 3 — Data Modelling

- Star schema basics
- Fact vs dimension tables
- Relationships — one-to-many, many-to-many
- Cardinality and cross-filtering
- Building a clean, scalable model

SESSION 24 Power BI Part 4 — DAX Fundamentals

- Calculated columns
- Measures
- SUMX, CALCULATE, FILTER
- Time-intelligence functions
- DIVIDE and error handling in DAX

SESSION 25 Power BI Part 5 — Dashboard Design

- Charts — bar, line, scatter, maps
- Slicers, filters, drill-downs

- Bookmarks and interactions
- KPI cards and summary metrics
- Dashboard storytelling — presenting insights not just charts

SESSION 26 Power BI Part 6 — Power BI Service

- Publishing dashboards to the cloud
- Sharing and collaboration
- Scheduled data refresh
- Row-level security basics

SESSION 27 Power BI Part 7 — Real-World Power BI Project

- End-to-end Power BI project from raw data to published dashboard
- Connecting SQL database to Power BI
- Building a multi-page business dashboard
- Advanced DAX measures for business KPIs
- Performance optimisation
- Mobile layout design
- Presenting dashboards to stakeholders

Business Analytics & Insights (Sessions 28–30)

SESSION 28 Business Analytics Part 1 — KPIs & Metrics Frameworks

- What are KPIs and why they matter
- North Star Metric
- OKRs — Objectives and Key Results
- Vanity metrics vs actionable metrics
- How to define the right KPI for a business problem
- KPI hierarchies — company, team, individual level

SESSION 29 Business Analytics Part 2 — Revenue, Customer & Marketing Metrics

- Revenue metrics — MRR, ARR, ARPU, LTV, CAC
- Customer metrics — churn rate, retention rate, DAU, MAU
- Marketing metrics — CTR, CPC, ROAS, conversion rate
- Funnel analysis
- Cohort analysis
- Finance metrics — gross margin, EBITDA basics
- Operations metrics — SLA, on-time delivery, efficiency

SESSION 30 Business Analytics Part 3 — Analytics in Practice

- Building a KPI dashboard in Power BI
- Forecasting basics
- Revenue and sales analytics
- Real business case studies
- Presenting insights to non-technical stakeholders

Machine Learning for Data Analysts (Sessions 31–34)

SESSION 31 ML Part 1 — Introduction & Supervised Learning

- What is machine learning
- Supervised vs unsupervised learning
- ML in business — Amazon, Netflix, Uber
- Linear and Multiple Regression
- Classification — Logistic Regression, Decision Trees, Random Forest
- Train/test split
- Overfitting vs underfitting
- Evaluation metrics — Accuracy, Precision/Recall, RMSE

SESSION 32 ML Part 2 — Clustering & Unsupervised Learning

- What is unsupervised learning
- K-Means clustering
- Customer segmentation using clustering
- Dimensionality reduction — PCA concept only
- Anomaly detection basics

- Real business clustering use cases

SESSION 33 ML Part 3 — Predictions & Scikit-Learn

- Feature engineering — encoding, scaling, creating features, handling missing values
- Scikit-Learn basics — importing, fitting, predicting, evaluating
- Building a simple prediction model end to end
- E-commerce — delivery prediction
- Finance — credit scoring
- Marketing — conversion prediction
- Operations — demand forecasting

SESSION 34 ML Part 4 — ML in Business Practice

- Translating business problems into ML problems
- Choosing the right algorithm for the right problem
- Interpreting and communicating ML results
- Model limitations and when not to use ML
- ML project lifecycle — from problem to production
- Real business ML case studies

AI Tools & Data Ethics (Sessions 35–36)

SESSION 35 AI Tools for Data Analysts

- Using AI to write Python, SQL, and Excel formulas
- AI-assisted data cleaning
- Prompt engineering for analytics
- Automating repetitive tasks
- AI-powered dashboard creation
- Real examples of AI in analyst workflows — ChatGPT, Microsoft Copilot

SESSION 36 Data Ethics, Domain Analytics & Experimentation

- Ethical data use
- GDPR and DPDPA basics
- Data security principles
- Bias in data and algorithms
- Marketing analytics — funnels, CAC, retention
- Finance analytics — P&L, forecasting
- HR analytics — attrition, performance metrics
- Operations analytics — efficiency, optimisation
- A/B testing — control vs treatment
- Designing experiments
- Analysing A/B test results
- Statistical significance
- Real business experimentation examples

TOOLS & TECHNOLOGIES COVERED

Spreadsheets	Microsoft Excel, Google Sheets
Programming	Python — Pandas, NumPy, Matplotlib, Seaborn, Scikit-Learn
Databases	SQL — MySQL / PostgreSQL
Visualisation	Power BI, Plotly
AI Tools	ChatGPT, Microsoft Copilot
Version Control	Git & GitHub
Platforms	Jupyter Notebook, Google Colab, CadetX Portal

INTERNSHIP & PLACEMENT PROGRAMME

Internship Programme (Months 4–5 • with Mentor Support)

Starting Month 4: Students begin working on real company-sourced data analysis projects with dedicated mentor support.

Starts Month 4	Real company-sourced data analysis projects begin. Weekly mentor guidance, collaboration with global peers via the CadetX portal, task-based learning, structured problem-solving, and project reports.
Mentor Support	Each student is paired with a mentor throughout the internship. Regular 1:1 check-ins, code reviews, and career advice to bridge theory and practice.
Certificate — 6-Month Experience Letter	Students who complete the internship receive a 6-Month Experience Certificate documenting their role, projects, skills, and tools — ready to add to a CV and LinkedIn profile.

Placement Support (Month 6 onwards)

From Month 6, CadetX activates full placement support. We do not just teach you data analysis — we help you get hired.

Starts Month 6 • Support Until Hired	Full placement support activated for all students who complete the technical training and actively engage with the internship.
CV Review & ATS Optimisation	Tailored for data analyst roles
LinkedIn Profile Optimisation	Headline, about, skills, featured
GitHub Portfolio Review	Project quality, README, commit activity
Mock Technical Interviews	SQL, Python, Power BI, Excel case studies
Behavioural Interview Preparation	STAR method, common DA questions
Job Recommendations	Matched to your skills and location
Referral to CadetX Partner Companies	Direct introductions to hiring teams
Interview Shortlisting Support	We advocate for you with employers
Portfolio Website	We build and host a professional portfolio website showcasing your projects, skills, and experience — a live URL you can share with any employer
Resume Preparation	We build your resume for you — professionally written, ATS-optimised, and delivered as a polished PDF ready to send to employers
CadetX Applies for Jobs on Your Behalf	Our team actively submits applications to matched roles — saving you time and ensuring your profile reaches the right employers directly
We Help You Until You Get a Job	Our placement support does not expire. We stay with you, keep recommending you, and keep opening doors until you secure your role

CadetX Job Recommendation Service: We actively recommend students to hiring companies in our partner network. When a role matches your profile — skills, location, experience level, and target salary — we put your name forward directly. CadetX applies for jobs on behalf of students. You do not just apply into the void. We open doors and we do not stop until you are hired.

CERTIFICATION & EXPERIENCE LETTER

Course Completion Certificate	Data Analyst Launchpad — issued by CadetX
6-Month Internship Experience Letter	Role, projects completed, and skills demonstrated
Skills & Tools Documentation	Formal record of every technology covered — ready for employers

ALUMNI ACCESS

Lifetime Portal Access	CadetX student portal and updated course materials forever
Alumni Community	Connect with peers who completed the same programme
Ongoing Job Referrals	If a matching role appears after the programme, we still recommend you
Events and Webinars	Invitations to CadetX industry sessions and alumni events
New Module Access	Updates to course content as the field evolves
Peer Mentoring	Alumni now working in data giving back to current students

CadetX Data Analyst Launchpad — Zero to Hired

36 Sessions • 3 Months Technical Training (3 sessions/week) • Internship from Month 4 • Placement from Month 6 • Alumni Access for Life
www.cadetx.co.uk