

Data Analytics with Python & SQL

Turn raw data into business decisions with SQL, Python, statistics, visualisation and a portfolio-ready analytics capstone.



8 weeks

DURATION

71 hours

GUIDED LEARNING

2 projects

PORTFOLIO

ABOUT THE ACADEMY

Practical learning. Work you can demonstrate.

Brightnest AI Academy brings live instruction, guided practice and career preparation together for individuals and teams.

23

FOCUSED COURSES

6

FLAGSHIP PROGRAMMES

Noida

ACADEMY LOCATION

Our approach

1

Learn

Understand concepts through live instruction and current examples.

2

Build

Apply learning through labs, assignments and guided projects.

3

Explain

Document decisions, results, trade-offs and limitations.

4

Prepare

Connect completed work with CVs, interviews and workplace conversations.

PEOPLE BEHIND THE ACADEMY

Meet Ranjeet Kumar



ACADEMY ADVISER

Ranjeet Kumar

Innovation & Growth Leader

15+ years

Experience in data, artificial intelligence and machine learning leadership.

Areas of expertise

- Data science and machine learning solution leadership
- AI product strategy and scalable data platforms
- Technology team leadership and mentorship
- Practical AI and data adoption for business transformation

Education

Master of Information Systems, Anna University, Chennai
Bachelor of Computer Science Engineering



COURSE OVERVIEW

Build your next set of skills

Analyse, transform and communicate data using SQL, Python and practical statistics. Progress from Analytics Foundations and Business Questions to Data Analytics Capstone through guided labs, assessed projects, and portfolio evidence.

Who this is for

Students, graduates, business analysts and professionals moving into data analytics.

Before you begin

No prior analytics experience is required. Basic spreadsheet familiarity is helpful.

Analytics work is credible when learners can turn business questions into clean SQL, reliable Python analysis, practical statistics, and decision-ready communication.



LEARNING OUTCOMES

What you will be able to do

01

Translate a business brief into KPIs, dimensions and an analysis plan.

02

Answer a business question set using a relational sales database.

03

Build retention, funnel and cohort analyses using window functions and CTEs.

04

Clean and combine multiple raw datasets into an analysis-ready table.

05

Analyse an experiment or campaign test and communicate statistical and business significance.

06

Automate a recurring KPI report from raw files/database to final output.

07

Complete a real-world business analytics project such as revenue, customer, operations or product analysis.

CURRICULUM

Course curriculum

8 modules · 8 weeks · 71 hours of guided learning

01 Analytics Foundations and Business Questions

5 hours

TOPICS

Analytics lifecycle · KPI design · Dimensions/measures · Data types · Descriptive versus diagnostic analysis · Stakeholder questions · Data quality

PRACTICAL WORK

Translate a business brief into KPIs, dimensions and an analysis plan.

Tools: Excel/Sheets optional, SQL, Python

Assessment: Case-study quiz

Portfolio evidence: Analytics requirements brief

02 SQL Foundations for Analytics

8 hours

TOPICS

SELECT · Filtering · Sorting · CASE · Aggregates · GROUP BY · HAVING · Joins · NULL handling · Date functions · Clean query style

PRACTICAL WORK

Answer a business question set using a relational sales database.

Tools: PostgreSQL/MySQL/SQLite

Assessment: SQL challenge set

Portfolio evidence: SQL analysis script

CURRICULUM

Course curriculum

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03 Advanced SQL and Analytical Queries

10 hours

TOPICS

CTEs · Subqueries · Window functions · Ranking · Cohort/retention logic · Pivots · Query optimisation basics · Reusable views

PRACTICAL WORK

Build retention, funnel and cohort analyses using window functions and CTEs.

Tools: PostgreSQL or cloud warehouse SQL

Assessment: Advanced SQL assessment

Portfolio evidence: Analytics SQL portfolio

04 Python Data Analysis with pandas

10 hours

TOPICS

pandas · NumPy · Cleaning · Joins · Groupby · Reshaping · Dates · Text · Reusable functions · Notebooks · Reproducibility

PRACTICAL WORK

Clean and combine multiple raw datasets into an analysis-ready table.

Tools: Python, pandas, NumPy, Jupyter

Assessment: Data-wrangling lab

Portfolio evidence: Clean analysis notebook



CURRICULUM

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05 Statistics for Data Analysts

8 hours

TOPICS

Distributions · Sampling · Confidence intervals · Hypothesis tests · Correlation · Regression intuition · A/B testing · Effect size · Common statistical traps

PRACTICAL WORK

Analyse an experiment or campaign test and communicate statistical and business significance.

Tools: Python, SciPy/statsmodels optional

Assessment: Statistics case

Portfolio evidence: Experiment analysis report

06 Exploratory Data Analysis and Visualisation

8 hours

TOPICS

EDA framework · Outliers · Segmentation · Distributions · Relationships · Visual selection · Chart integrity · Annotations · Storytelling

PRACTICAL WORK

Produce an EDA report with a clear narrative and recommended actions.

Tools: Python, Matplotlib/Plotly optional

Assessment: EDA review

Portfolio evidence: Executive EDA report



CURRICULUM

Course curriculum

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07 Analytical Data Products and Automation

8 hours

TOPICS

Reusable queries · Parameterised notebooks · Simple ETL · Scheduled scripts · Data quality checks · Exports · Stakeholder-ready outputs

PRACTICAL WORK

Automate a recurring KPI report from raw files/database to final output.

Tools: Python, SQL, Git, Scheduler optional

Assessment: Automation lab

Portfolio evidence: Automated analytics workflow

08 Data Analytics Capstone

14 hours

TOPICS

Question framing · SQL extraction · Python analysis · Statistics · Visualisation · Executive summary · Recommendations · Portfolio storytelling

PRACTICAL WORK

Complete a real-world business analytics project such as revenue, customer, operations or product analysis.

Tools: SQL, Python, GitHub

Assessment: Capstone presentation

Portfolio evidence: End-to-end data analytics portfolio project

APPLIED PORTFOLIO

Projects you will build

Two portfolio projects supported by guided module work.

PORTFOLIO PROJECT 1

Executive Revenue Analytics

Analyse revenue, customers and products using SQL/Python and present actionable insights.

DELIVERABLES

SQL scripts · Notebook · Charts · Executive summary

PORTFOLIO PROJECT 2

Product Funnel Analysis

Build an acquisition-to-conversion funnel and cohort analysis with recommendations.

DELIVERABLES

SQL cohort queries · Python analysis · KPI report

LEARNING EXPERIENCE

Learn, practise and present

- Live instructor-led sessions that connect concepts to real workplace decisions.
- Guided labs and workshops in every module.
- Assignments, checkpoints and practical feedback.
- Portfolio documentation, demonstrations and capstone review.
- Access to recordings and LMS resources according to the published batch policy.
- Career preparation based on completed work and target roles.

Tools you will work with

Excel · Sheets · SQL · Python · PostgreSQL · MySQL · SQLite · Cloud warehouse SQL · pandas · NumPy · Jupyter · SciPy · statsmodels · Matplotlib · Plotly · Git

CAREER PREPARATION

Build confidence for interviews

A structured process to connect your learning with your next career step.

01**Role clarity**

Identify roles that fit your background, interests and current skills.

02**Profile readiness**

Review your CV, LinkedIn, GitHub and project summaries.

03**Project proof**

Prepare to demonstrate completed work and explain your decisions.

04**Interview practice**

Practise technical questions, project walkthroughs and interviews.

05**Opportunity updates**

Receive relevant job openings and employer requirements, subject to availability and learner readiness.

Career support helps you prepare. Employment outcomes depend on experience, project quality, interview readiness and market conditions.

LEARNER JOURNEYS

Companies where our learners have been hired

Across the Brightnest AI Academy learner community



Learner employment history across the academy; not a placement guarantee for this course. Names and logos identify employers; they do not imply endorsement or a hiring partnership.

BEFORE YOU ENROL

Your questions, answered

Is the Data Analytics with Python & SQL course suitable for beginners?

This course progresses from foundation to intermediate level. No prior analytics experience is required. Basic spreadsheet familiarity is helpful.

What will I build during the course?

You will complete guided labs in every module and build two portfolio projects: Executive Revenue Analytics and Product Funnel Analysis. Deliverables include working files or code, documentation, testing or evaluation evidence, and a final presentation.

Which tools and platforms are covered?

Key tools include Excel, Sheets, SQL, Python, PostgreSQL, MySQL, SQLite, and cloud warehouse SQL. Additional platforms are introduced in relevant modules through practical tasks, and the toolset may evolve as industry practice changes.

How long does the course take?

The course includes approximately 71 guided learning hours across 8 modules, delivered over 8 weeks.

Which career paths can this course support?

The curriculum supports the development of skills relevant to roles such as Data Analyst, Business Data Analyst, and Junior Analytics Engineer. Career outcomes depend on prior experience, project quality, interview readiness and market conditions; employment is not guaranteed.

BEFORE YOU ENROL

Your questions, continued

Will I receive mentor and career support?

The course includes live instruction, lab support, assignment feedback, project reviews and career preparation covering portfolio development, CV writing, LinkedIn profile improvement, and interview guidance.

FEES & ADMISSIONS

Plan your next step

COURSE FEE

INR 35,000 + GST

EMI and easy instalments available

Duration	8 weeks
Level	Foundation-Intermediate
Learning format	Live mentor-led learning
Batch starts	Expected Saturday / Sunday starts

Check the live Batches page for the next expected weekend. Confirm the exact date, class times and availability with admissions.

Book a free demo class >

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brightnestaiacademy.com/batches

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