

THE 5-PROJECT ROADMAP (4 MONTHS)

This roadmap is designed for someone targeting Data Analyst / entry-level Data Science roles, learning Python, SQL, Power BI, statistics, and basic ML without DSA focus.

PROJECT 1 (FOUNDATION)

Sales Data Analysis & Cleaning

Timeline: Month 1 | Difficulty: ■■■■■■

Why this project?

Teaches pandas basics, real-world messy data, and analyst-style thinking.

Core skills:

- Pandas (read_csv, dropna, fillna)
- Data types and datetime handling
- GroupBy and aggregations
- Basic matplotlib/seaborn
- Business metrics (revenue, growth)

Learning framework:

Follow ONE YouTube tutorial on sales data analysis using pandas.

Your modification:

- Use a different dataset (Indian ecommerce/retail)
- Add 2 extra business questions

Final output:

- Python notebook
- Cleaned dataset
- Insight summary

PROJECT 2 (SQL + BUSINESS THINKING)

E-Commerce Order Analysis (SQL + Python)

Timeline: Month 1–2 | Difficulty: ■■■■■■

Why this project?

SQL is the top filter for DA internships.

Core skills:

- SQL queries
- Joins and aggregations
- KPIs
- SQL to Python workflow

Learning framework:

Follow SQL ecommerce analysis project tutorial.

Your modification:

- Design your own schema
- Change KPIs (repeat customers, AOV, order frequency)

Final output:

- SQL queries
- Python validation
- Business insights

PROJECT 3 (EDA + STORYTELLING)

Customer Churn Analysis (No ML)

Timeline: Month 2 | Difficulty: ■■■■■■

Why this project?

Churn analysis is widely used across companies.

Core skills:

- Correlation analysis
- Distribution analysis
- Categorical comparisons
- Storytelling with insights

Learning framework:

Follow churn analysis EDA tutorial.

Your modification:

- Change industry domain
- Add hypothesis-based questions

Final output:

- Python notebook
- Insight documentation

PROJECT 4 (POWER BI)

Business Intelligence Dashboard

Timeline: Month 3 | Difficulty: ■■■■■■

Why this project?

Power BI is highly demanded in Indian corporate roles.

Core skills:

- Data modeling
- DAX basics
- KPI dashboards
- Business reporting

Learning framework:

Follow end-to-end Power BI dashboard tutorial.

Your modification:

- Use your own cleaned dataset
- Build sales, profit, and region dashboards

Final output:

- Power BI file
- Dashboard screenshots
- Insight explanation

PROJECT 5 (CAPSTONE)
Customer Segmentation OR Revenue Prediction
Timeline: Month 4 | Difficulty: ■■■■■■

Why this project?
Differentiates you from beginner analysts.

Options:
- Customer segmentation using K-Means
- Revenue prediction using regression

Learning framework:
Follow ML project tutorial focused on interpretation.

Your modification:
- Use a different dataset
- Focus on business meaning over accuracy

Final output:
- Python notebook
- Clear explanation

TIMELINE SUMMARY

January: Project 1 + SQL basics
February: Project 2 + Project 3
March: Power BI project
April: Capstone + resume
March–April: Internship applications

Golden rule:
Use YouTube to learn logic, then change data, questions, and presentation.