

## 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.

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### 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
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### 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
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### 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
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### 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

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**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

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#### 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.