

# 1 Vendor Performance Analysis Project

## Project Overview

Analyze supplier performance using key business metrics to identify high-performing vendors, optimize procurement strategies, and reduce costs. Learn how data-driven evaluation helps improve business efficiency.

## What You'll Learn

- ★ Data cleaning and preprocessing for vendor data
- ★ EDA and statistical analysis to assess performance trends
- ★ Building Power BI dashboards for KPI visualization
- ★ Interpreting metrics like on-time delivery, defect rate, and cost efficiency
- ★ Creating a professional report for management


## Project Pipeline


1. Import and clean vendor performance data
2. Perform exploratory and statistical analysis
3. Build Power BI dashboard for performance tracking
4. Generate actionable insights for decision-making
5. Prepare report summarizing findings


 Resources You'll Get Inside: [https://topmate.io/ayushi\\_mishra/page/vyNvUQ2k54](https://topmate.io/ayushi_mishra/page/vyNvUQ2k54)

 Cleaned & Raw Datasets

 Python Scripts for ETL

 Power BI Dashboard (PBIX File)

 EDA & Hypothesis Testing Notebook

 Final Report

## Learn How to Build It

 Watch Full Tutorial:

<https://www.youtube.com/watch?v=nmCfNHjfgEY&t=6736s&pp=0gcJCSIKAYcqIYzv>

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## 2 A/B Testing & Regression Analysis Project

### Project Overview

A statistical project focused on A/B testing and regression analysis. Learn how marketing agencies use experiments to identify the best-performing platform for ads and predict conversions post-selection.

### What You'll Learn

- ★ Formulating research questions and hypotheses
- ★ Performing A/B testing for platform selection
- ★ Running regression analysis to predict conversions
- ★ Interpreting weekly and monthly performance trends
- ★ Presenting results to non-technical stakeholders

### Project Pipeline

1. Define business objective (select ad platform)
2. Collect and clean campaign performance data
3. Conduct A/B test
4. Apply regression analysis
5. Summarize insights and recommendations



**Resources You'll Get Inside:** [https://topmate.io/ayushi\\_mishra/961244](https://topmate.io/ayushi_mishra/961244)



Dataset



Python Notebook for Analysis



**Learn How to Build It**



Watch Full Tutorial

<https://www.youtube.com/watch?v=iCj4IT5KvJk&t=2552s>

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## 3 Maximizing Revenue for Drivers using Python

### Project Overview

A hypothesis testing project that explores how drivers can increase their revenue using data analysis. Showcase your ability to test assumptions and make business-driven recommendations.




### **What You'll Learn**

- ★ Define business hypothesis and test statistically
- ★ Choose correct statistical tests
- ★ Analyze revenue and driver data
- ★ Present results using storytelling and visuals

### **Project Pipeline**

1. Define hypothesis
2. Perform data cleaning
3. Run hypothesis tests
4. Analyze results and interpret findings
5. Prepare professional report

 **Resources You'll Get Inside:** [https://topmate.io/ayushi\\_mishra/886630](https://topmate.io/ayushi_mishra/886630)

-  Dataset
-  Analysis Notebook
-  PPT with Insights

### **Learn How to Build It**

 Watch Full Tutorial

<https://www.youtube.com/watch?v=fNdUIzq8sb0&t=21s>

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## **4 Airlines Data Analysis Project**

### **Project Overview**

Perform end-to-end analysis of airline occupancy and profitability using Python and SQL. Understand how airlines balance costs, environmental factors, and profitability.

### **What You'll Learn**

- ★ SQL querying and data extraction
- ★ Python-based analysis and visualization
- ★ Business decision-making using data
- ★ Writing a professional report

### Project Pipeline

1. Extract & transform data using SQL
2. Analyze occupancy & profit metrics
3. Visualize findings with Python
4. Write analytical report



**Resources You'll Get Inside:** [https://topmate.io/ayushi\\_mishra/317474](https://topmate.io/ayushi_mishra/317474)



Dataset



Python + SQL Files



Detailed Report



### Learn How to Build It



Watch Full Tutorial

[https://www.youtube.com/watch?v=LcMjsqZiSjY&list=PLunlGNVWDAabJk\\_eCr5XtXLnaU-lxeyo\\_&index=3&pp=gAQBiAQB](https://www.youtube.com/watch?v=LcMjsqZiSjY&list=PLunlGNVWDAabJk_eCr5XtXLnaU-lxeyo_&index=3&pp=gAQBiAQB)

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## Financial Analysis (CAPM) Project using Python



### Project Overview

A time series financial analysis web app showcasing your Python and finance knowledge. Learn to apply CAPM and portfolio theory for market analysis.



### What You'll Learn

- ★ Implement CAPM in Python
- ★ Analyze stock returns and risk
- ★ Create visualizations for financial data
- ★ Build a simple interactive dashboard

## Project Pipeline

1. Import stock data
2. Perform CAPM calculations
3. Visualize portfolio performance
4. Generate insights and report



**Resources You'll Get Inside:** [https://topmate.io/ayushi\\_mishra/318261](https://topmate.io/ayushi_mishra/318261)



**Dataset**



**Python Code for CAPM Model**



**Learn How to Build It**



**Watch Full Tutorial**

Part 1:

[https://www.youtube.com/watch?v=ibkrdqM2naU&list=PLunlGNVWDAabJk\\_eCr5XtXLnaU-lxeyo\\_&index=7&pp=gAQBiAQB](https://www.youtube.com/watch?v=ibkrdqM2naU&list=PLunlGNVWDAabJk_eCr5XtXLnaU-lxeyo_&index=7&pp=gAQBiAQB)

Part 2:

[https://www.youtube.com/watch?v=IY8HZ2Z\\_sn4&list=PLunlGNVWDAabJk\\_eCr5XtXLnaU-lxeyo\\_&index=8](https://www.youtube.com/watch?v=IY8HZ2Z_sn4&list=PLunlGNVWDAabJk_eCr5XtXLnaU-lxeyo_&index=8)

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## 6 User Engagement Analysis using Python and SQL



**Project Overview**

Understand how companies use SQL to analyze user engagement data. Learn advanced querying and storytelling with SQL and Python.



**What You'll Learn**

- ★ Real-world SQL data analysis
- ★ Advanced queries for insights
- ★ Combining Python + SQL for analytics
- ★ Creating a detailed presentation report

## Project Pipeline

1. Create and store database tables
2. Fetch and analyze engagement data
3. Visualize user metrics
4. Prepare insights report



**Resources You'll Get Inside:** [https://topmate.io/ayushi\\_mishra/932870](https://topmate.io/ayushi_mishra/932870)



Database Creation Notebook



Analysis Notebook



Report PPT



## Learn How to Build It



Watch Full Tutorial

<https://www.youtube.com/watch?v=2VMAdlzNuTw&t=4509s>

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# 7 Hotel Booking Analysis using Python



## Project Overview

Analyze hotel booking patterns to identify reasons for cancellations and optimize operations. A practical project solving a real business problem.



## What You'll Learn



EDA and data visualization



Understanding business impact of booking behavior



Creating clear reports for management



Communicating data stories effectively

## Project Pipeline

1. Load and clean booking data
2. Analyze cancellation patterns
3. Visualize seasonal and pricing trends

#### 4. Present actionable insights



**Resources You'll Get Inside:** [https://topmate.io/ayushi\\_mishra/317433](https://topmate.io/ayushi_mishra/317433)



Complete Code



Dataset



PDF Report



**Learn How to Build It**



Watch Full Tutorial

[https://www.youtube.com/watch?v=objZ1rB7TKc&list=PLunIGNVWDAabJk\\_eCr5XtXLnaU-lxeyo\\_&index=1&pp=gAQBiAQB](https://www.youtube.com/watch?v=objZ1rB7TKc&list=PLunIGNVWDAabJk_eCr5XtXLnaU-lxeyo_&index=1&pp=gAQBiAQB)

### More Useful Resources:

**Get Complete bundle of 7 projects in less price:**

[https://topmate.io/ayushi\\_mishra/770872?utm\\_source=public\\_profile&utm\\_campaign=ayushi\\_mishra](https://topmate.io/ayushi_mishra/770872?utm_source=public_profile&utm_campaign=ayushi_mishra)

**Complete Job Preparation and Interview Guide:** [https://topmate.io/ayushi\\_mishra/842027](https://topmate.io/ayushi_mishra/842027)

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