



SQL + Python E-Commerce Analytics Project

Hybrid analysis using SQL Server and Python (Jupyter Notebook)

Project Objective

Start Point

Analytical questions (text file) —
no dashboards first

End Goal

Complete analytics workflow:
ingest → analyze → visualize

Hybrid Focus

Integrate SQL Server with Python in Jupyter





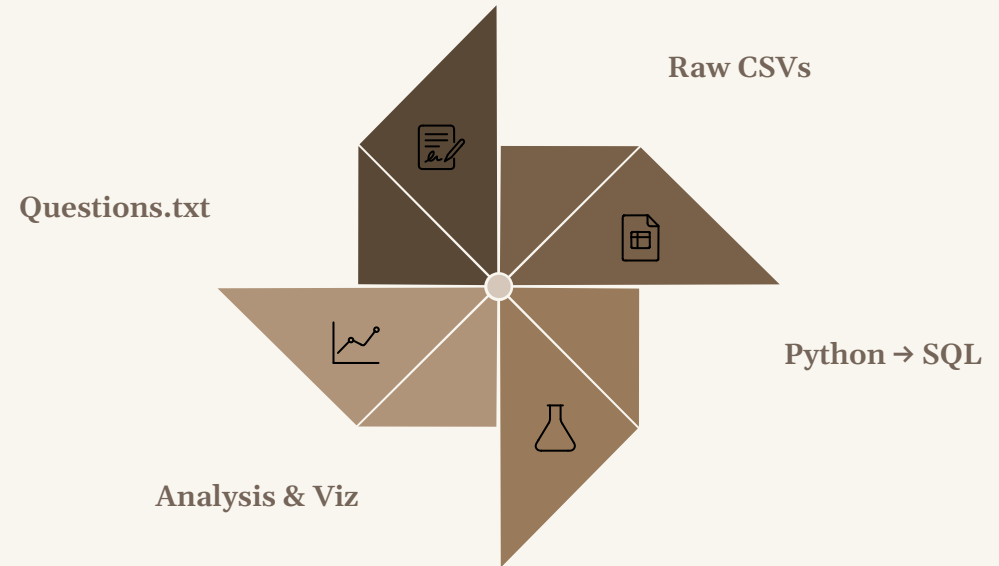
Tools & Technologies

- SQL Server (SSMS)
- Python (pandas, pyodbc / SQLAlchemy)
- Jupyter Notebook
- matplotlib, seaborn

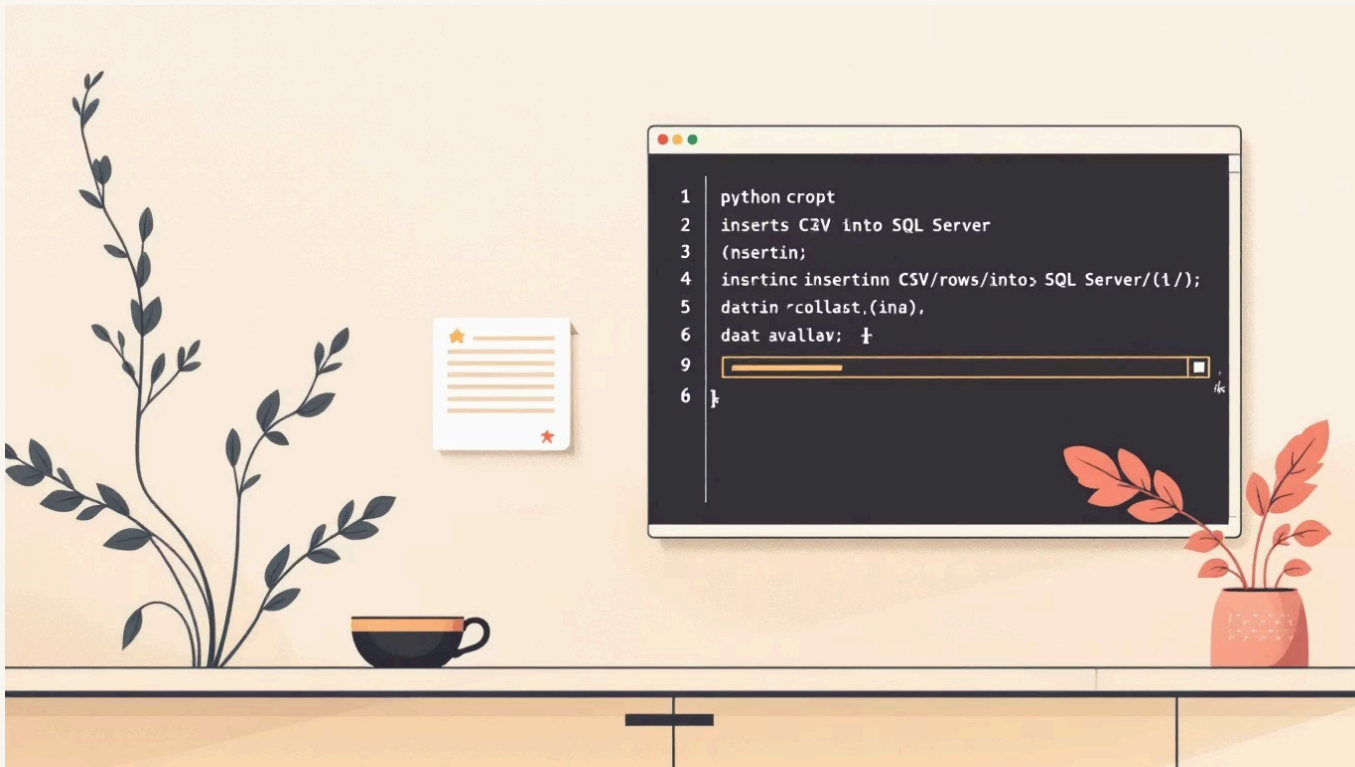
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Project Workflow

End-to-end pipeline from raw CSV to business insights

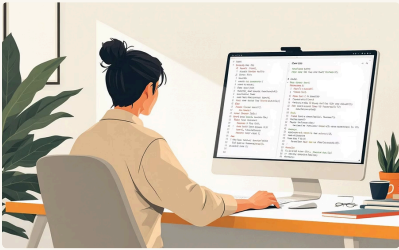


Pipeline ensures reproducibility and centralized workflow



Data Ingestion & Integrity

- Programmatically load CSVs into SQL Server
- Create tables and assign data types
- Verify data integrity post-insert



SQL Analysis

Filtering, aggregation, joins, ranking, conditional logic



Python Integration

Execute queries, load into pandas, transform for viz



Visualization

matplotlib & seaborn: trends, distributions, outliers



Conclusion & Capabilities

What We Built

Reproducible hybrid
SQL-Python analytics workflow

Key Skills

Data ingestion, SQL querying,
Python connectivity,
visualization

Business Impact

Translate questions into actionable insights