Retail Sales Insights Dashboard – Data Analysis Using Python

This project is a comprehensive analysis of retail sales data using Python. It extracts meaningful business insights like revenue trends, top-selling products, most ordered items, and customer behavior across time.

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## 👨‍💻 Project By

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## 🔍 Objective

To clean, analyze, and visualize sales data to help businesses identify patterns in product demand, monthly performance, and peak shopping times. The goal is to support data-driven decisions using visual dashboards.

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## 🛠 Tools & Technologies Used

- Python

- Pandas

- Matplotlib

- VS Code

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## 📌 Key Features

- 📅 \*\*Monthly Sales Analysis\*\* – Visualizes monthly revenue patterns

- 🥇 \*\*Top 5 Products by Sales\*\* – Identifies the highest earning products

- 📦 \*\*Most Ordered Products by Quantity\*\* – Tracks customer purchase trends

- 📈 \*\*Monthly Sales Trend Over Time\*\* – Highlights year-long performance

- ⏰ \*\*Hourly Sales Trend\*\* – Determines peak ordering times

- 🏆 \*\*Best Month Identification\*\* – Finds the most profitable month

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- `sales\_analysis.py` – Python script with all analysis and plots

- `sales\_data.csv` – Sample input data (cleaned and used for analysis)

- `Retail\_Sales\_Insights\_Durga\_Prasad\_Gadi.pdf` – Final project report with graphs

- Output screenshots (optional)

- This `README.md`

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## 🚀 How to Run

1. Clone the repo or download the files

2. Make sure Python, pandas, and matplotlib are installed

3. Run the script using:

```bash

sales\_analysis.py