🏍️ Motorcycle Part Sales Analysis

# 📌 Project Overview

This project explores motorcycle part sales using PostgreSQL for querying and Python for visualization. The goal is to identify trends, customer behaviors, and revenue drivers using real transactional data.

# 🛠️ Technologies Used

- PostgreSQL (SQL Queries)

- Python (pandas, seaborn, matplotlib)

- Jupyter Notebook

- psycopg2 and SQLAlchemy for DB connection

# 📁 Dataset Overview

The dataset contains detailed sales data including invoice numbers, product lines, sales amounts, client types, payment methods, and dates.

Key columns: order\_number, date, warehouse, client\_type, product\_line, quantity, unit\_price, total, payment, payment\_fee.

# 📥 PostgreSQL Table Creation & Data Import

Below is the SQL used to create the table and load the data from a CSV file:

-- Create table  
CREATE TABLE sales (  
 order\_number TEXT,  
 date DATE,  
 warehouse TEXT,  
 client\_type TEXT,  
 product\_line TEXT,  
 quantity INT,  
 unit\_price NUMERIC(10,2),  
 total NUMERIC(10,2),  
 payment TEXT,  
 payment\_fee NUMERIC(10,2)  
);  
  
-- Copy data from CSV file to table  
COPY sales   
FROM 'C:/Program Files/PostgreSQL/17/data/data\_copy/sales.csv'   
DELIMITER ',' CSV HEADER;

# 📊 Key Analyses

- Top-selling product lines by revenue

- Monthly sales trends

- Sales by client type

- Revenue by payment method

- Payment fee analysis

# 📈 Insights Summary

1. Top-performing product lines contribute significantly to overall sales revenue.  
2. Monthly sales trends reveal sales spikes in specific months, possibly due to seasonal demand or promotions.  
3. Consumer clients drive a large portion of the total revenue compared to corporate clients.  
4. Payment method analysis shows that some methods incur higher transaction fees, which may affect profitability.