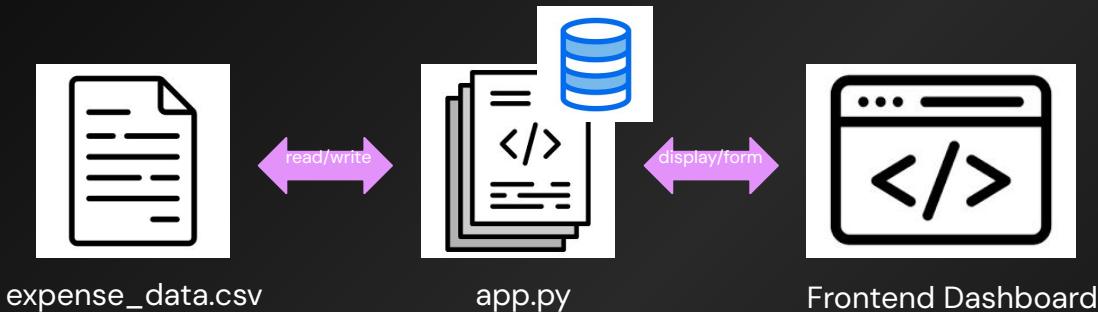


# Simple Expense Tracker

## Capgemini Assessment

Built by Kyle Day

# High-Level Design



- File-based storage using **expense\_data.csv** (no DB required)
- Streamlit UI with three pages:
  - View Expenses
  - Add Expense
  - Expense Trends
- Pandas for data processing (grouping, totals, trend aggregation)
- Altair for analytics visualization
- Modular engine-like functions inside app (load\_expenses, add\_expense, etc.)

# Core Functionality

- Add new expenses
- Add new categories dynamically
- Compute total expense
- Total expense by category
- Highest and lowest spend categories
- Visual analytics:
  - Category box plot
  - Daily spend trend
  - Simple 7-day spend prediction

Simple Expense Tracker				
All Expenses				
Total Expense	Highest Spend Category	Lowest Spend Category		
\$64,224.48	rent	software		
category	amount	data		time_id
165 software	39.99	Monthly accounting subscription		2025-08-02T19:33:05
164 inventory	730	Restock: power drills		2025-08-02T18:50:31
163 advertising	310	Local billboard ad		2025-08-02T17:39:42
162 equipment	455	Ladder replacement		2025-08-02T16:00:52
161 utilities	218.6	August water bill		2025-08-02T14:49:14
160 shipping	83.1	Outgoing delivery order 984		2025-08-02T13:30:27

### Add a New Expense

Category: advertising      Amount: 0.00

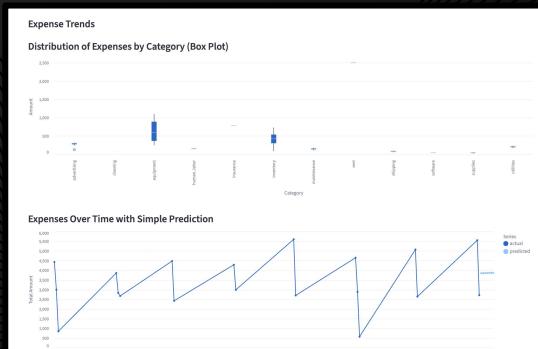
Description (data column):  
e.g. Shift payment - J. Lopez

Save Expense

### Manage Categories

Add a new Category  
e.g. utilities, advertising, equipment

Add Category



# Project Structure & Key Files

app.py

– Main Streamlit UI + logic

expense\_data.csv

– Seed data (file-based storage)

requirements.txt

– Dependencies

README.md

– Documentation

# How to Run Locally

## 1. Clone the repository

```
git clone https://github.com/<your-username>/<repo-name>.git  
cd <repo-name>
```

## 2. Install dependencies

```
pip install -r requirements.txt
```

## 3. Run the application

```
streamlit run app.py
```

Your default browser will automatically open the app.

\*CSV updates live as expenses are added

**Hosted version:**

[kd-capgemini-app.streamlit.app](#)

\*Persists data during runtime

# Testing & Verification

- Add a new expense → verify:
  - Appears in table
  - Totals update
  - Category totals update
- Add a new category → appears in dropdown
- View trend page after updates:
  - Box plot renders
  - Trend line updates
  - Prediction line appears

All Expenses				
Total Expense	Highest Spend Category	Lowest Spend Category		
\$69,224.48	rent	software		
	category	amount	data	time_id
166	human_labor	5000	New demo expense that I added on the add expense tab	2025-12-02T18:40:07
165	software	39.99	Monthly accounting subscription	2025-08-02T19:33:05
164	inventory	730	Restock: power drills	2025-08-02T18:50:31
163	advertising	310	Local billboard ad	2025-08-02T17:39:42

All Expenses				
Total Expense	Highest Spend Category	Lowest Spend Category		
\$158,112.48	Secret new cat...	software		
	category	amount	data	time_id
167	Secret new category	88888	Mega top secret nefarious expense	2025-12-02T18:43:26
166	human_labor	5000	New demo expense that I added on the add expense tab	2025-12-02T18:40:07
165	software	39.99	Monthly accounting subscription	2025-08-02T19:33:05
164	inventory	730	Restock: power drills	2025-08-02T18:50:31

# Seed Data

```
category,amount,data,time_id
human_labor,142.50,Shift payment - J. Lopez,2025-01-01T08:15:02
inventory,324.99,Restock: 2x4 lumber bundle,2025-01-01T09:22:44
utilities,189.30,January electricity bill,2025-01-01T10:11:50
rent,2500.00,Monthly store rent,2025-01-01T10:59:41
supplies,45.20,Packaging tape refill,2025-01-01T12:03:27
inventory,88.75,Restock: galvanized nails,2025-01-01T13:42:18
equipment,599.99,New drill press maintenance kit,2025-01-01T14:50:09
human_labor,160.00,Shift payment - M. Lee,2025-01-01T16:12:48
cleaning,72.10,Weekly cleaning service,2025-01-01T17:20:31
advertising,310.00,Local radio ad slot,2025-01-01T18:42:04
```

- **expense\_data.csv** includes ~160 rows of realistic hardware store expenses
- Categories include: labor, rent, inventory, materials, equipment, etc.
- Allows full demonstration of:
  - Category totals
  - Trends over time
  - Prediction quality

# Future Enhancements

- Real database backend (PostgreSQL / SQLite)
- User authentication
- Export to CSV/Excel
- Multi-user expense separation



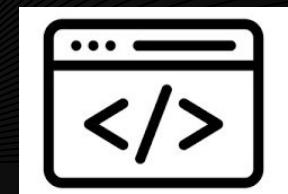
database



Local report download



app.py



Frontend Dashboard



# Thank you!

I'm excited to hear about the next  
steps of the recruitment process.

<https://github.com/kwday888/CapgeminiTestApp/tree/main>

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