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BHOPAL

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TITLE: EXPENSE TRACKER

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Course: B.Tech CSE AIML

PROBLEM STATEMENT

**Managing daily expenses manually becomes difficult and time-consuming.
People often forget where their money is being spent and struggle to
analyze spending patterns.**

**The Problem is that, No easy and simple tool for students to track
daily expenses and visualize spending categories**

Project Objectives:

**The aim of this project is to
Provide an application to record daily expenses easily
Categorize and store expense information
Visualize expenses to understand financial patterns
Help users control and optimize spending**

FUNCTIONAL REQUIREMENTS

The system provides the requirements are

1. Add Expenses (Input: date, category, amount, description)
2. Save & Load Expenses (.csv file)
3. Display and Manage Expense Records
4. Visualization of expenses using bar charts



NON-FUNCTIONAL REQUIREMENTS

The non functional requirements can be

Usability: Simple and user-friendly interface using Streamlit

Performance: Processes data instantly and visualizes dynamically

Reliability: Stores data in structured form (.csv file)

Maintainability: Modular code with reusable functions

Scalability: Can add login system or cloud database in future

SYSTEM ARCHITECTURE

User enter → Streamlit UI → DataFrame Processing
[Pandas] → Storage (.csv) → Visualization [Matplotlib]

WORKFLOW DIAGRAM

User → Add Expense → Save to CSV → Display Table → Visualize
Chart → Analyze Spending

USE CASE DIAGRAM

USER CASES USED: Add Expense, Load Expense, Save Expense, View Records,
Visualize Chart

IMPLEMENTATION MODULES

Module Description

- Add Expense Adds data to session dataframe
- File Operations Save & load CSV
- Display Expenses Shows table on UI
- Visualization Bar graph analytics

TECHNOLOGIES WHICH ARE USED :-

- * Python 3.12
- * Streamlit - Web UI
- * Pandas - Data Handling
- * Matplotlib / Seaborn - Visualization
- * VS Code

EXPENSE TRACKER INTERFACE

Deploy

Add Expense

Date
2025/11/24

Category
Food

Amount
0.00 - +

Description

Add

File Operations

save Expenses

Priyanshi Expense Tracker ↗

Expenses

	Date	Category	Amount	Description
empty				

Visualization

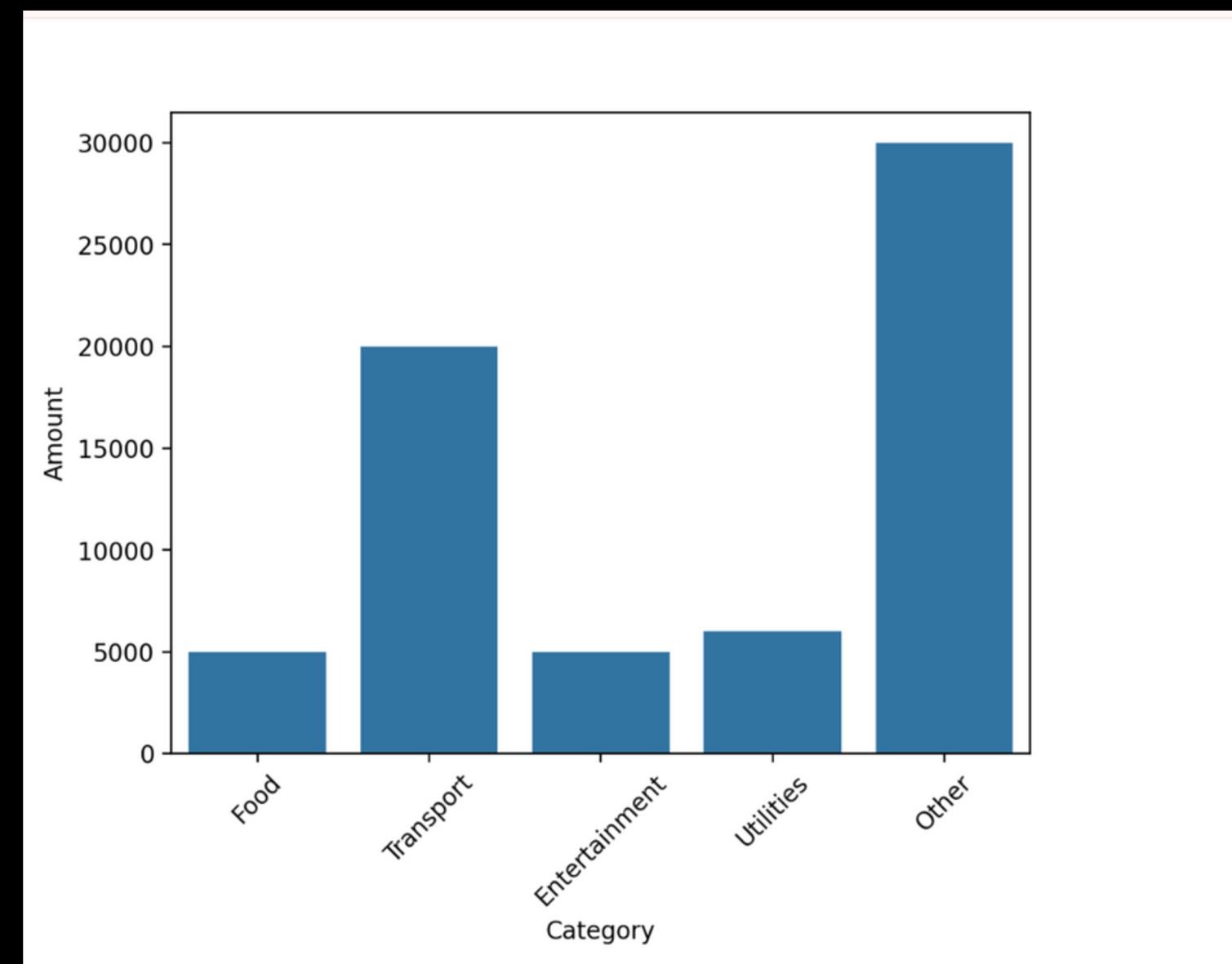
Visualize Expenses

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Expenses

	Date	Category	Amount	Description
0	2025-11-24	Food	5000	cafe food
1	2025-11-24	Transport	20000	flight
2	2025-11-24	Entertainment	5000	movie
3	2025-11-24	Utilities	6000	snacks
4	2025-11-24	Other	30000	shopping

Visualization



challenges which I faced in installing required modules streamlit, pandas ,handling csv load and session_state
formatting graph alignment.

LEARNINGS AND KEY TAKEAWAYS

Built real-world application using Streamlit
Hands-on experience in data handling and visualization
Improved understanding of Python modular programming

FUTURE ENHANCEMENTS

User login & authentication system
Cloud storage database (Firebase / MySQL)
Pie chart & monthly budget analytics
Mobile version using Streamlit Cloud

REFERENCES OF THIS PROJECT ARE:

Python and Streamlit Documentation
YouTube Tutorials
VIT Course Material

CONCLUSION

Expense Tracker is a practical real-life project that helps in financial planning through efficient tracking and visualization of daily spending.

THANK YOU