Project Title	Personal UPI Usage and Financial Analyzer using LLMs
Skills take away From This Project	● **PDF Data Extraction and Parsing** ● **Data Cleaning and Structuring** ● **Large Language Model Integration (OpenAI, Hugging Face)** ● **Langflow-based Flow Design** ● **Financial Data Analysis and Recommendation** ● **Deployment using Gradio/Streamlit on Hugging Face Spaces** ●
Domain	**FinTech / Personal Finance Automation**

Problem Statement:

Develop an AI-powered application that processes UPI transaction statements from multiple apps (Paytm, GPay, PhonePe, etc.) and generates actionable insights and personalized financial advice using LLMs.

The system must extract transaction details from varied PDF formats, structure the data, analyze spending behavior, and deliver tailored recommendations to users via an interactive dashboard or report.

Business Use Cases:

Personal Finance Management: Help users track and understand spending behavior.

Spending Habit Detection: Identify patterns, frequent merchants, and wasteful expenses.

Budgeting Assistant: Recommend personalized savings strategies and alert users.

Multi-App Integration: Unify transactions across different UPI platforms.

Approach

1. Dataset Preparation

- Input: UPI PDF statements from Paytm, PhonePe, GPay, etc.

- Output: Structured data in CSV/JSON with fields: Date, Time, Amount, Receiver, Description, Category

2. Text Preprocessing and Structuring

- Parse PDF using tools like PyMuPDF or pdfplumber

- Normalize and clean data using Pandas

3. Model Development

- Use Langflow to build a flow with chained LLM components

- Perform analysis for:

  - Spending patterns

  - Time-based trends

  - Category-wise summaries
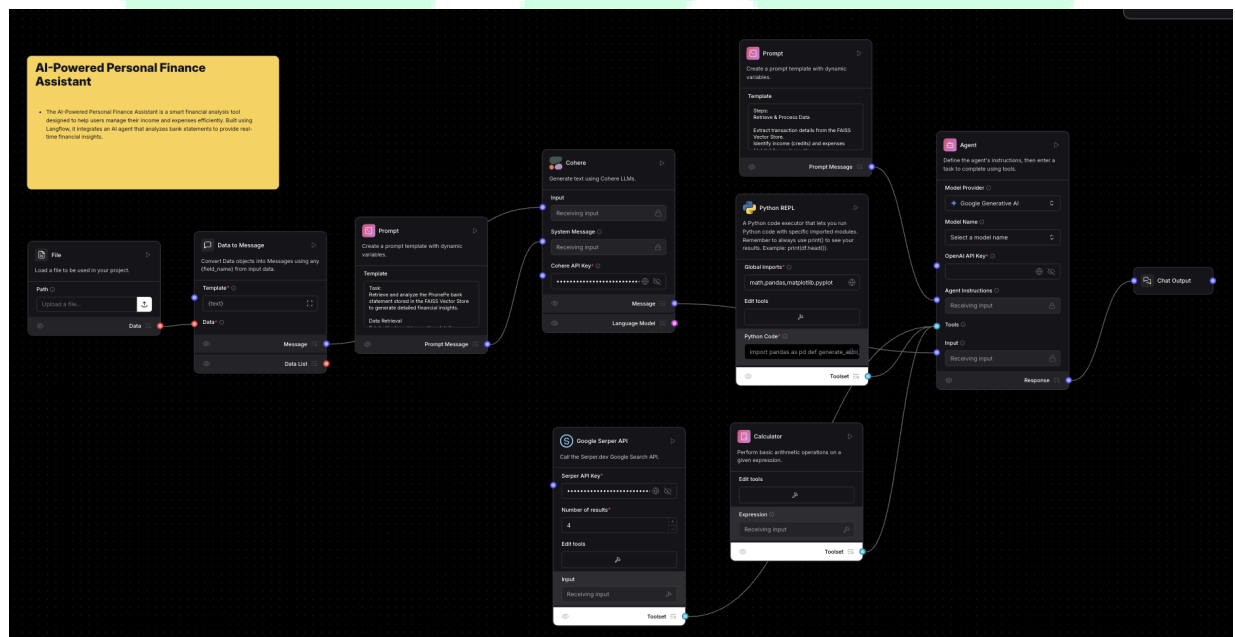
○ Wasteful transaction detection

4. LLM Recommendation Generation

- Prompt LLM for:

  ○ Monthly budget planning

  ○ Suggestions to reduce unnecessary spending

  ○ Personalized financial advice

5. Deployment

- Deploy interface using Gradio or Streamlit

- Host the app on Hugging Face Spaces or a free-tier cloud

EXAMPLE FLOW(Optional)

Results

Expected Outcomes

- Working UPI analyzer app

- Real-time insights generation with LLMs

- Personalized recommendations to users

Impact

- Enhances personal financial literacy

- Empowers users with actionable financial data

- Simplifies handling of multi-source UPI data
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Project Evaluation Metrics

1. Accuracy of PDF data extraction

2. LLM response relevance (measured by human evaluation or user feedback)

3. Completeness of structured output

4. Response time for insight generation

5. User satisfaction with the recommendations

Technical Tags

- NLP
- Transformers
- Binary Classification
- Text Pair Modeling
- Gradio Deployment
- Hugging Face Spaces

Project Deliverables

1. Python Codebase (GitHub)

2. Streamlit or Gradio-based UI

3. Deployed link (Hugging Face / Replit)

4. ReadMe file with usage instructions

5. Video walkthrough or demo

6. Optional: Project presentation slide deck

Project Guidelines

1. **Version Control**:
   - Use Git for tracking changes.
   - Include detailed commit messages.
2. **Coding Standards**:
   - Follow PEP 8 guidelines for Python.
   - Modularize code into functions or classes.
3. **Best Practices**:
   - Test the model on unseen data before deployment.
   - Monitor class imbalance during training to avoid bias.

Timeline:

1 week

References:

Hugging face course - [Link](#)

Streamlit documentation in hugging face - [Link](#)

Pre-trained models - [Link](#)

PROJECT DOUBT CLARIFICATION SESSION (PROJECT AND CLASS DOUBTS)

About Session: The Project Doubt Clarification Session is a helpful resource for resolving questions and concerns about projects and class topics. It provides support in understanding project requirements, addressing code issues, and clarifying class concepts. The session aims to enhance comprehension and provide guidance to overcome challenges effectively.
Note: Book the slot at least before 12:00 Pm on the same day

Timing: Monday-Saturday (4:00PM to 5:00PM)

Booking link :https://forms.gle/XC553oSbMJ2Gcfug9

For DE/BADM project/class topic doubt slot clarification session:

Booking link : https://forms.gle/NtkQ4UV9cBV7Ac3C8

Session timing:

For DE: 04:00 pm to 5:00 pm every saturday
For BADM 05:00 to 07:00 pm every saturday

LIVE EVALUATION SESSION (CAPSTONE AND FINAL PROJECT)

About Session: The Live Evaluation Session for Capstone and Final Projects allows participants to showcase their projects and receive real-time feedback for improvement. It assesses project quality and provides an opportunity for discussion and evaluation.
Note: This form will Open only on Saturday (after 2 PM) and Sunday on Every Week

Timing:

For BADM and DE
Monday-Saturday (11:30AM to 1:00PM)

For DS and AIML
Monday-Saturday (05:30PM to 07:00PM)

Booking link : https://forms.gle/1m2Gsro41fLtZurRA

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