

Financial Statement Analyzer

This project is a web-based application built with Streamlit that uses a Large Language Model (LLM) to extract, analyze, and visualize data from PDF bank statements.

Features

- **Universal PDF Parsing:** Upload a bank statement from any bank, and the AI will intelligently extract the key information.
- **Structured Data Output:** The application provides two clean CSV files: one for account information and one for all transaction records.
- **Automated Transaction Analysis:** Automatically flags noteworthy transactions based on predefined rules (e.g., large withdrawals, specific entities).
- **Data Visualization:** Generates an interactive timeline chart to visualize deposits and withdrawals over time.

How to Run This Application

Follow these steps to set up and run the application on your local machine.

Prerequisites

- Python 3.8 or higher installed on your system.
- A code editor like VS Code, Sublime Text, or PyCharm.

1. Set Up the Project Folder

First, make sure you have all the necessary files in a single project folder:

- `app.py` (The main application script)
- `requirements.txt` (Lists the required Python packages)
- `.env` (For your API key)

2. Get Your Gemini API Key

This application requires a Google Gemini API key to function.

1. Go to **Google AI Studio** (aistudio.google.com).
2. Sign in and click on "**Get API key**" to create a new key.
3. Copy the generated API key.

3. Configure Your Environment

1. **Add Your API Key:** Open the .env file in your code editor and paste your Gemini API key into it, replacing the placeholder text.
2. `GEMINI_API_KEY="YOUR_GEMINI_API_KEY_GOES_HERE"`
3. **Install the Required Libraries:** Open your terminal or command prompt, navigate to your project folder using the `cd` command, and run the following to install all necessary packages:
4. `pip install -r requirements.txt`

4. Launch the Application

Once the setup is complete, run the following command in your terminal from the project folder:

```
streamlit run app.py
```

Your web browser will automatically open a new tab with the "Financial Statement Analyzer" application running.

5. Usage

1. Click on the "Browse files" button or drag and drop a PDF bank statement into the file uploader.
2. The application will process the file, and the results (account info, analysis, and visualization) will appear in the tabs below.
3. Use the download buttons in the first tab to save the extracted data as CSV files.