Group 31

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DollarBot

Simplify Spending, Amplify Savings.

WHY YOU SHOULD CHOOSE THIS PROJECT?

- **Solve a real world problem faced by many people and help them to manage their finances effectively.**
- **Gain experience in OpenCV by integrating an image recognition model to automate expense categorization**
- **Improve your data analysis skills in Python and implement models for budget forecasting.**

WHAT CAN DOLLARBOT DO?

Automated Budgeting
- The Telegram bot offers an efficient and user-friendly way to record and manage daily expenses. Instead of manually entering data into spreadsheets, users can input their spending through simple commands, which the bot processes instantly. This automation saves time and reduces the chances of errors, making the budgeting process smoother and more accurate.

Payment Reminders
- One of the key features of the bot is its ability to send timely reminders for recurring payments like rent, utilities, subscriptions, or loan payments. This eliminates the hassle of using multiple apps or manually setting reminders, ensuring that users never miss a due date, helping them avoid late fees or penalties.

Expense Categorization
- The bot automatically organizes expenses into categories such as groceries, entertainment, transportation, and utilities. This saves users from the tedious task of manual categorization and provides a clear overview of their spending in various areas, enabling them to quickly assess where their money is going.

Visual Insights
- To provide deeper insights into financial health, the bot generates detailed visual summaries of the user's spending habits. These include pie charts, bar graphs, and line charts that break down expenses over time. By presenting data in a visual format, the bot makes it easier for users to spot trends, track monthly patterns, and make informed decisions.

Download Expense Records in CSV or PDF
- The bot allows users to download their entire expense record in both CSV and PDF formats instantly. This feature provides flexibility for users who prefer to analyze their data offline or integrate it into other tools. It also ensures that users have a backup of their financial data whenever needed.

HOW TO TAKE IT TO THE NEXT LEVEL?

ML Model for Expense Analysis and Budget Forecasting
- By integrating a machine learning model, the bot can significantly enhance expense analysis and budget forecasting. This model will improve upon basic algorithms by learning from both existing spending datasets and user-specific data, offering more personalized predictions and insights.

Support for Multi-User Budgeting
- The bot can accommodate multiple users, allowing family members or roommates to manage shared expenses collectively. This feature simplifies tracking of joint expenditures like rent, utilities, or groceries, offering a clear overview of each person's contributions and enabling more collaborative budgeting.

Receipt Image Recognition with OpenCV
- Adding the ability to upload pictures of receipts, the bot can use OpenCV for image recognition to automatically categorize expenditures. This eliminates the need for manual entry of receipt details, reducing time and effort.

Streamlined User Interface for Faster Interactions
- The user experience can be further optimized by reducing the number of steps needed to add an expense or interact with the bot. By eliminating redundant menu items and simplifying navigation, users will enjoy a faster, more efficient experience, saving time and increasing the likelihood of regular usage.

TESTING STATS

- **Multiple test cases written for 21 separate functionalities.**
- **Add new features without breaking the old ones.**

REPO LINK

WORKING DEMO

IMPLEMENTATION TIMELINE

Improved Budget Forecasting using ML

Receipt Image Recognition

Multi-user Budgeting

Streamline Menu Items for Better UX