

BỘ THÔNG TIN VÀ TRUYỀN THÔNG
HỌC VIỆN CÔNG NGHỆ BƯU CHÍNH VIỄN THÔNG



Seventh Report
Foundation Internship
ChippyCash
Smart Chatbot for Easier Expense Management

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INTERNSHIP BASE REPORT - WEEK 7

1. Overview

During this week, I focused on developing and improving the ChippyCash system with several new features and significant performance enhancements. The detailed work completed is outlined below:

2. Completed Tasks

2.1 AI Assistant Integration with Image Analysis

- Developed the feature to upload and analyze receipts through images.
- Integrated an image processing API to extract transaction information from receipts automatically.
- Added a user interface for uploading images within the chatbot window.

2.2 Chatbot Interface Enhancements

- Added typing indicators to improve user experience by showing system response progress.
- Optimized the message display format for better readability.
- Enabled the display of uploaded images directly within the chat window.

2.3 Financial Assistant Functionality Improvements

- Expanded the scope of financial data analysis with more detailed metrics.
- Added the ability to detect spending trends based on transaction history.
- Enhanced the recommendation algorithm to suggest saving strategies according to user spending patterns.

2.4 Customization and Role Diversification for AI Assistant

- Implemented a multi-role assistant system (e.g., Smart Assistant, Strict Mom, Homie).
- Developed varied interaction flows based on the selected role.
- Added functionality to switch roles dynamically within a chat session.

2.5 Performance Optimization

- Improved rendering performance by applying `will-change` properties.
- Optimized animation handling using `transform: translateZ(0)` to leverage GPU acceleration.
- Enhanced concurrent message and image processing for smoother interaction.

2.6 User Interface (UI) Improvements

- Adjusted UI elements for better support on mobile devices.
- Upgraded transition effects for a smoother user experience.
- Added visual feedback when interacting with UI components.

2.7 Advanced Transaction Management Features

- Developed the ability to detect and create transactions automatically from chat content.
- Designed a friendly popup for transaction editing.
- Improved the transaction storage and categorization system for better management.

3. Plan for Next Week

- Continue improving the accuracy of receipt image analysis.
- Develop a periodic automatic expense reporting feature.
- Further optimize chatbot response time and overall system performance.
- Expand the variety and interaction styles of AI assistant roles.

4. Challenges and Solutions

During development, integrating image processing into the chatbot presented synchronization challenges.

This issue was addressed by adjusting the processing flow and implementing status indicators to allow users to monitor the analysis progress, thereby significantly improving the overall user experience.

