



Project Based Learning –V

DevLoop

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WalletWise AI – AI-Powered Personal Finance Management Platform is a comprehensive financial assistance system designed to simplify and enhance personal money management by acting as an intelligent digital finance advisor. It integrates AI-driven analytical intelligence to examine user transactions, identify spending patterns, and generate meaningful financial insights that support informed decision-making and long-term savings behavior.

Problem Statement

The current landscape of personal finance management is marked by several critical inefficiencies that hinder individuals from effectively understanding and controlling their financial behavior. Many users rely on fragmented tools such as spreadsheets, banking apps, and standalone expense trackers, resulting in scattered financial data and limited visibility into overall spending patterns. This lack of integration often prevents users from developing a clear and consistent understanding of their financial health. As a result, users often focus on recording expenses rather than gaining actionable insights or improving financial decision-making.

Methodology

1. Intelligent Financial Data Analysis (AI-Driven Insights)

The system utilizes an AI-driven analytical engine to interpret user financial data and generate meaningful insights. User transactions, including expenses and income records, are processed to identify spending patterns, recurring expenses, and potential budget inefficiencies. By analyzing historical financial behavior, the system produces personalized recommendations and actionable insights that assist users in making informed financial decisions. This module acts as the core **intelligence engine** of the platform.

2. Secure Data Management & Storage

To ensure data integrity and privacy, all user financial information is securely stored and managed using **MongoDB** with schema enforcement through **Mongoose**. Sensitive data such as user credentials are encrypted using **bcrypt**, while access to financial records is protected through **JWT-based authentication**. This secure data layer ensures that personal financial information remains confidential and accessible only to authorized users.

3. Goal-Based Financial Planning & Monitoring

WalletWise AI enables users to define savings goals and track their progress over time. The system continuously correlates income, expenses, and savings targets to provide real-time feedback on goal achievement. If deviations from planned budgets are detected, the platform generates intelligent nudges to help users adjust their spending behavior proactively. This module promotes long-term financial discipline and structured money management.

Key Features



1. Intelligent Expense Tracking System

WalletWise AI provides a structured mechanism for recording and managing financial transactions, including expenses and income. Users can manually add transactions with category classification, enabling accurate tracking of daily spending. This module lowers the effort required to maintain financial records and ensures consistent data collection for further analysis.

2. AI-Driven Financial Insight Engine

The system incorporates an intelligent analysis layer that examines historical transaction data to identify spending trends, recurring expenses, and potential inefficiencies. By applying AI-driven logic, the platform generates personalized insights and recommendations that help users make informed financial decisions and improve budgeting behavior.

3. Goal-Based Savings Planner

A dedicated savings planning module allows users to define financial goals and monitor progress over time. The system continuously compares income and expenses against predefined targets and provides timely feedback when deviations occur. This feature encourages disciplined saving and long-term financial planning.

4. Secure User Authentication & Profile Management

WalletWise AI implements robust authentication mechanisms using JWT and encrypted password storage with bcrypt. This module ensures that user data remains secure and accessible only to authorized individuals, building trust and protecting sensitive financial information.

Project Highlights

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WalletWise AI

Features How it Works Benefits

[View Dashboard](#)

• Agentic Finance Assistant

Take control of your money with AI

WalletWise AI tracks your expenses, spots overspending, and helps you hit your savings goals—automatically.

[View Dashboard](#)

[Learn More](#)

No complex setup. Just connect your data and let the agent work.

Monthly Spending Summary

₹38,200 spent

↗ Within budget



AI Insights

AI

- You spent 32% on Food this month (+8% vs last month).
- Cut ₹1,500 from eating out to hit your goal.
- Your subscriptions total ₹1,800/month.



Project Highlights

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WalletWise AI

Dashboard

Transactions

Goals

Settings

Welcome to Your Dashboard 🙌

Here's your financial overview

• AI agent: Active

Upload CSV

+ Add Transaction

Monthly Overview

Total Spent This Month

₹0

Income

₹0

Saved

₹0

Where your money goes

No expense data yet



AI Financial Insights

↗ Summary

No transaction data available for analysis.

✓ Key Insights

- Add transactions to get personalized financial insights

⚠ Risks

Back to Home

Project Highlights

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WalletWise AI

Dashboard

Transactions

Goals

Settings

Transactions

Manage your income and expenses

+ Add Transaction

Type

All Types

Category

All Categories



No transactions yet

Start tracking your finances by adding your first transaction

Add Transaction

Back to Home

Project Highlights

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WalletWise AI

Savings Goals

Track your financial goals and progress

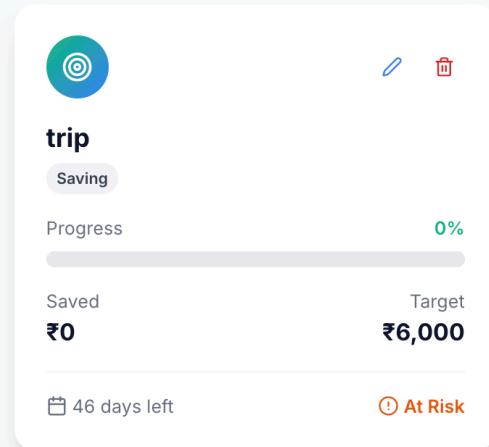
Add New Goal

Dashboard

Transactions

Goals

Settings



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Project Highlights

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WalletWise AI

Dashboard

Transactions

Goals

Settings

Settings

Manage your account and preferences



Profile Settings

Update your personal information and preferences



Notifications

Manage your notification preferences and alerts



Security & Privacy

Control your security settings and data privacy



Appearance

Customize the look and feel of your dashboard



Data Management

Export, import, or delete your financial data

App Information

Version
1.0.0

Last Updated
Dec 2025

Status
Active

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Conclusion

WalletWise AI – AI-Powered Personal Finance Management System redefines the way individuals interact with and manage their personal finances by seamlessly integrating intelligent analysis into a unified, secure financial management platform. By combining AI-driven insight generation with robust data security mechanisms, WalletWise AI functions as an intelligent financial assistant that continuously analyzes user behavior and provides meaningful, actionable recommendations. It empowers users to gain clarity over their spending patterns, plan savings goals effectively, and make informed financial decisions—all through a single, intuitive web interface. WalletWise AI represents a significant advancement in AI-assisted personal finance solutions, making financial management more accessible, efficient, and reliable for users.

References/Links used

- **React Documentation:** <https://react.dev/>
- **FastAPI Documentation:** <https://fastapi.tiangolo.com/>
- **Google AI (Gemini) API:** <https://ai.google.dev/docs>
- **Tailwind CSS:** <https://tailwindcss.com/docs>
- **MongoDB Documentation:** <https://www.mongodb.com/docs/>



*Thank
you!*

