

Google Cloud

PRESENTS

Agentic AI Day

Build the next generation of intelligent agents

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Team Details

- a. Team name: 3AMCoders
- b. Team leader name: Dhakhayah Senthilkumar
- c. Problem statement: Receipt management for Google Wallet

Brief about the idea

- **Project Raseed** is an **AI-native receipt assistant** that integrates directly with **Google Wallet** to convert everyday receipts into **intelligent, personalized, and actionable financial assets**.
- It extracts **item-level data** from **photos, videos, or live streams** using **Gemini's multimodal capabilities** and structures them into **Wallet passes** with detailed **categorization, usage timelines, and iqueryable insights**.
- Each receipt is **semantically analyzed** to provide users with smart features like **automatic spend classification, item usage prediction, localized price tracking, and sustainability impact estimation**.
- The assistant enables **natural language interaction** in **regional Indian languages**, offering **contextual suggestions** such as **meal plans, inventory forecasts, and shopping reminders** based on **historical purchase behavior**.
- Unique **Indian-context features** like **hyperlocal price alerts for perishables** and **intelligent bill splitting for shared households** enhance usability, while **Wallet passes** serve as **dynamic, live-updating dashboards** linked back to the assistant.

Opportunities

Aspect	Existing Solutions (e.g., Zoho, Expensify)	Project Raseed	How Raseed Solves the Problem	USP of Project Raseed
Core Functionality	Only extract and store receipt data	Extracts, analyzes, and acts on receipt data	Provides insights, notifications, and contextual intelligence	Intelligent assistant , not just a repository
Language Support	English or limited multilingual support	Understands local Indian languages	Users can ask questions in their preferred regional language	Multilingual AI for inclusive access
Wallet Integration	No support for digital wallet platforms	Fully integrated with Google Wallet	Stores receipts and insights as interactive passes inside Wallet	Dynamic Wallet pass generation and updates
Receipt Capture Input	Image/PDF upload only	Supports photo, video, and live stream ingestion	Captures receipts from any medium in real time	First-of-its-kind multimodal receipt ingestion
Spending Guidance	Manual categorization and static reports	Offers meal plans, reorder reminders, and budgeting tips	Helps users understand their spending and suggests ways to save	Personalized spending and lifestyle suggestions
Local Vendor Insights	No regional vendor data or pricing comparison	Compares prices from nearby/local vendors	Suggests cheaper alternatives based on receipt items	Contextual local vendor comparison engine
Eco-Friendly Intelligence	No sustainability features	Identifies eco-friendly or reusable product alternatives	Encourages sustainable choices in shopping and usage	Built-in eco- sustainability tips

List of features offered by the solution

1. Expense Tracking & Categorization

This feature automatically identifies and organizes your purchases into categories like groceries, personal care, or electronics.

2. Item Usage Timeline Prediction

It estimates how long your items will last be based on quantity and type, and notifies you before you run out.

3. Spending Pattern Initiation

After your first receipt, it projects your monthly expenses to help you begin budgeting right away.

4. Meal Planning From Groceries

Based on what you've bought, it suggests meal ideas and adjusts them to local cuisines.

5. Recurring Purchase Detection

It keeps track of frequently bought items and reminds you to reorder them when due.

6. Price Intelligence & Local Comparison

Monitors item prices over time and recommends nearby stores offering lower rates.

List of features offered by the solution

7. Sustainability Score & Impact

Identifies purchases that are environmentally heavy (like plastic-packaged goods) and suggests greener options.

8. Warranty & Return Tracking

Spots items with warranties or return periods and alerts you before they expire.

9. Smart Notifications & Nudging

Sends helpful reminders when products may be running low, so you can restock in time.

10. Dynamic Google Wallet Passes

Generates smart passes for Google Wallet that include item lists, usage tips, and shortcuts to your assistant.

11. Local Market Alerts for Perishables

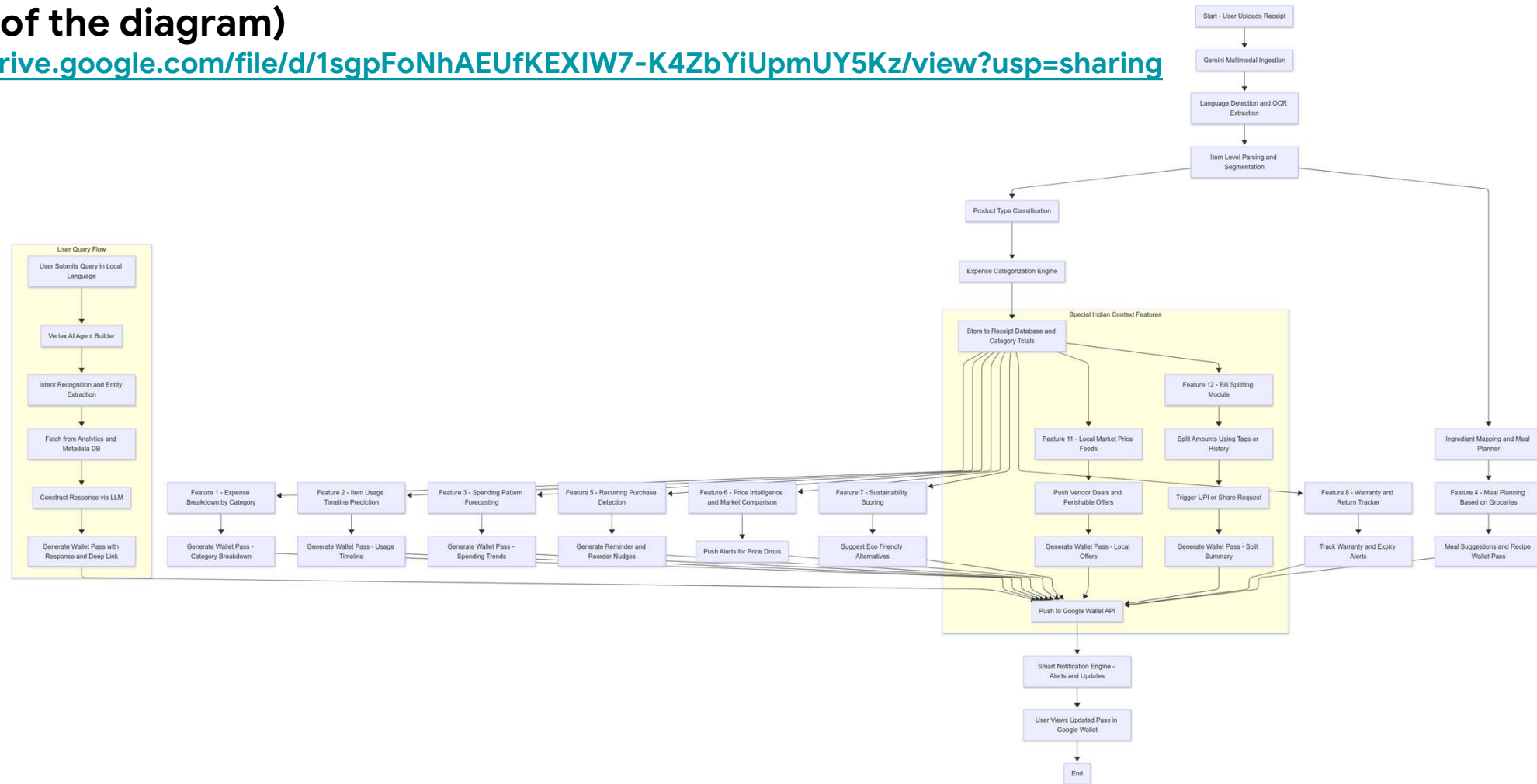
Notifies you about fresh deals from nearby local vendors, especially for perishables.

12. Bill Splitting for Shared Households

Detects shared purchases and helps you split costs fairly using UPI or other methods.

Process flow diagram or use-case diagram (Please click on the link below to view clear image of the diagram)

<https://drive.google.com/file/d/1sgpFoNhAEUfKEXIW7-K4ZbYiUpmUY5Kz/view?usp=sharing>

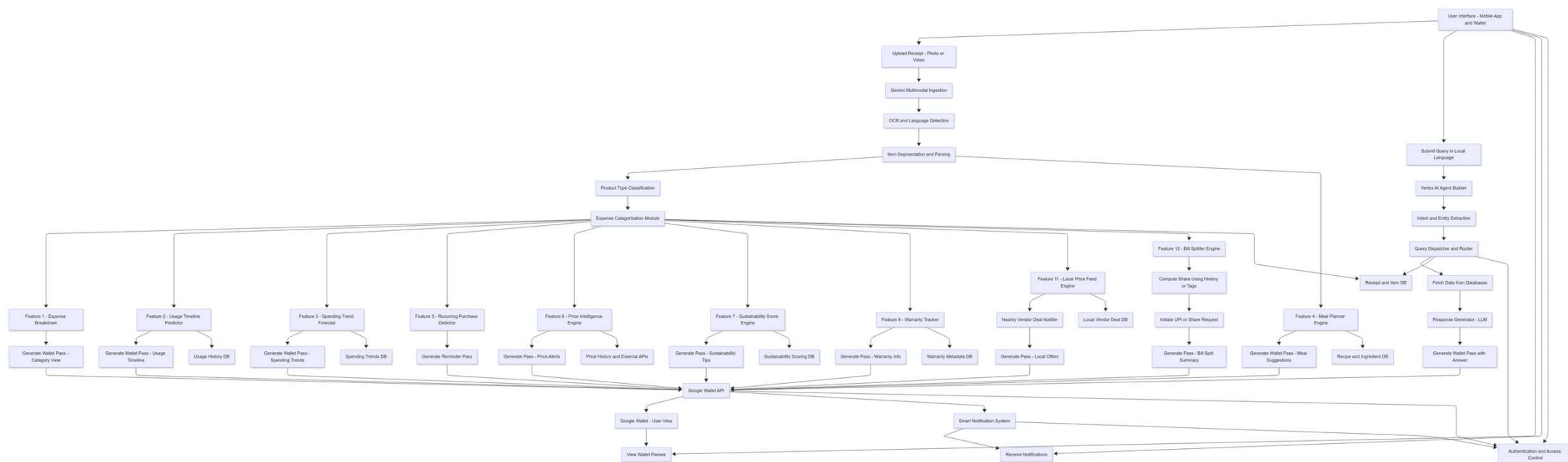


Technologies to be used in the solution

- **AI/ML & Modeling** - Gemini Multimodal Model, Vertex AI Agent Builder, Vertex AI AutoML Tables, BigQuery ML, Vertex AI Text APIs
- **Receipt Parsing & NLP** - OCR (Gemini Vision / Document AI), Language Detection, Custom Taxonomy Models, Entity Extraction (Vertex NLP)
- **Data Storage & Processing** - Firestore, BigQuery, Cloud Storage
- **Notifications & Smart Nudges** - Firebase Cloud Messaging (FCM), Context-Aware Alert Engine
- **Google Wallet Integration** - Google Wallet API (Passes: Create, Update, Push)
- **User Interface & App Layer** - Android App or Web PWA, Firebase Auth, UPI Deep Link Integration
- **Other Extensions** - Looker Studio (Dashboards), Geo Firestore (Local Alerts), Agmarknet API (Local Market Prices – Govt. of India), Recipe API, Sustainability DB, External Price APIs.

Architecture diagram of the proposed solution (Please click on the link below to view clear image of the diagram)

<https://drive.google.com/file/d/1ovHLNzFbAFjDpr62pNZpymO7e0M9DNN2/view?usp=sharing>





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Thank you!

