

# Diskarte AI — Project Definition

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## Overview

**Diskarte AI** is a Filipino-focused AI assistant application designed to empower Filipino users with practical, AI-powered tools for everyday challenges — from navigating government bureaucracy to landing a job in the BPO industry. The app is built as a cross-platform (web, Android, iOS) Flutter application backed by Firebase and Google Gemini AI.

**Project ID:** diskarte-ai **Live URL:** <https://diskarte-ai.web.app> **Region:** Asia-Southeast1 (Singapore)

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## Core Features

### 1. Bureaucracy Breaker

Helps users write formal Philippine government documents such as barangay indigency letters, passport inquiry letters, and other official correspondence. Uses formal Filipino/English tone appropriate for government agencies.

### 2. Diskarte Toolkit

A professional communication assistant for job seekers — particularly those targeting the BPO industry. Includes resume writing guidance and professional email/message drafting.

### 3. Aral Masa (Homework Helper)

An educational assistant that explains academic concepts step-by-step in a way that Filipino students can easily understand. Covers a range of subjects with clear, patient explanations.

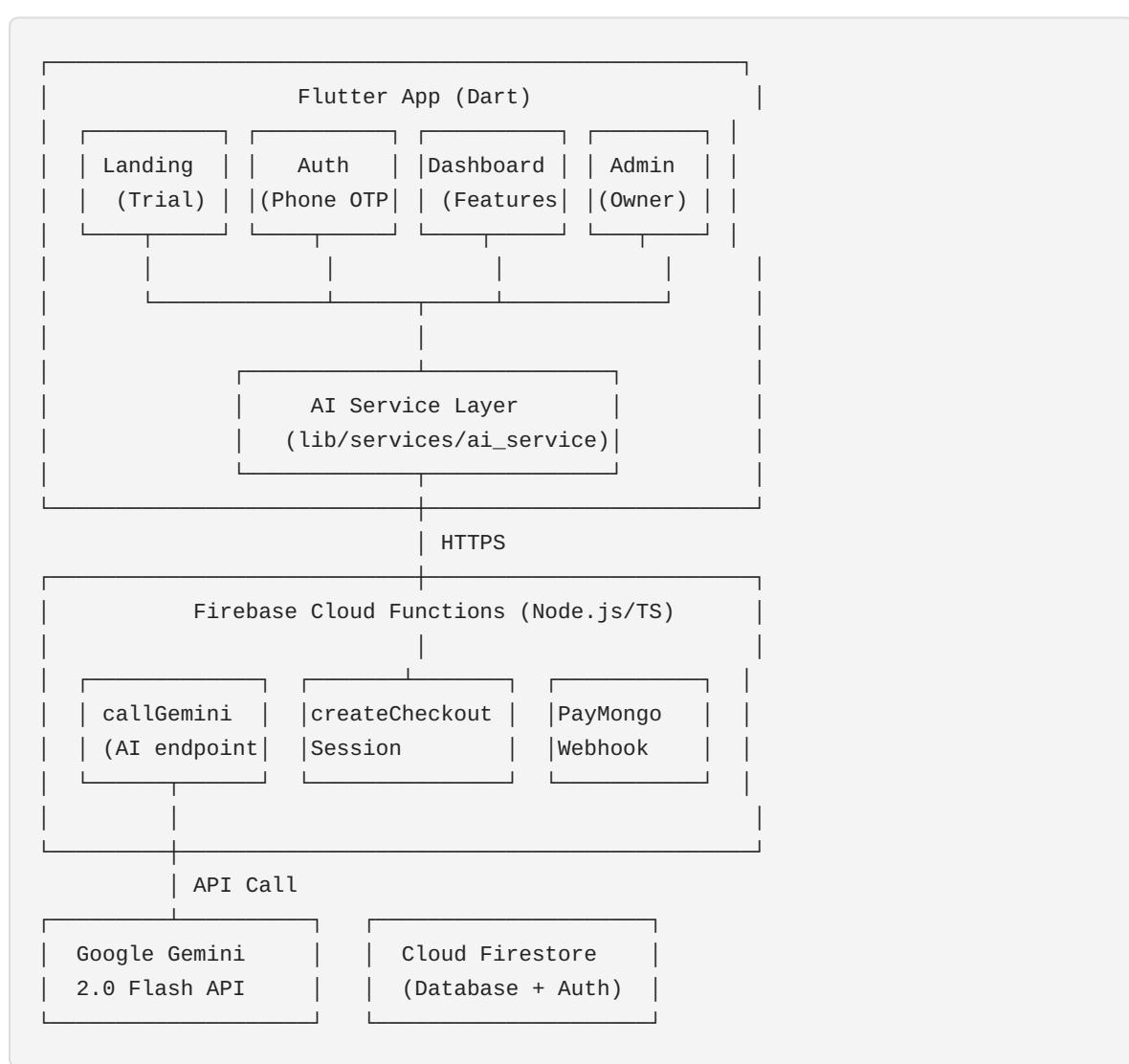
### 4. Diskarte Coach

A motivational coach that uses Filipino slang and a friendly "Tropa" (buddy) tone to encourage and guide users through personal and professional challenges.

## Monetization Model

Tier	Details
Free Trial	3 messages on the landing page (anonymous auth)
Day Pass	₱1 for 24-hour unlimited access (beta pricing)
Payment Methods	GCash, PayMaya, Card, Grab Pay via PayMongo

## Architecture



# Tech Stack

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## Frontend

Component	Technology
Language	Dart
Framework	Flutter (SDK ^3.10.3)
State Management	Provider (v6.1.5)
UI System	Material Design 3
HTTP Client	http (v1.6.0)
Local Storage	SharedPreferences
Markdown Rendering	flutter_markdown

## Backend

Component	Technology
Runtime	Node.js 20
Language	TypeScript (^4.9.5)
Framework	Firebase Cloud Functions
AI Model	Google Gemini 2.0 Flash
AI SDK	@google/generative-ai (v0.24.1)

## Infrastructure

Component	Technology
Database	Cloud Firestore
Authentication	Firebase Auth (Phone + Anonymous)
Hosting	Firebase Hosting
Error Tracking	Firebase Crashlytics
Payments	PayMongo API

# Project Structure

```
diskarte-ai/
|
|   lib/                                # Flutter App Source
|       main.dart                      # App entry point
|       firebase_options.dart        # Firebase config
|       config/
|           owner_config.dart      # Admin UID
|       services/
|           ai_service.dart        # Backend communication
|       features/
|           landing/              # Landing page + trial chat
|           auth/                 # Phone login screen
|           dashboard/            # Main dashboard
|           resume/               # Resume wizard
|           bureaucracy/          # Government docs helper
|           shared/               # Common widgets
|           admin/                # Admin dashboard
|
|   functions/                           # Cloud Functions Backend
|       src/
|           index.ts                  # All cloud functions
|           prompts.ts              # AI system prompts
|       package.json
|       tsconfig.json
|
|   web/                                 # Flutter web shell
|   assets/images/                      # App images
|   firestore.rules                     # Database security rules
|   firebase.json                       # Deployment config
|   pubspec.yaml                        # Flutter dependencies
```

## Entry Points

### Frontend

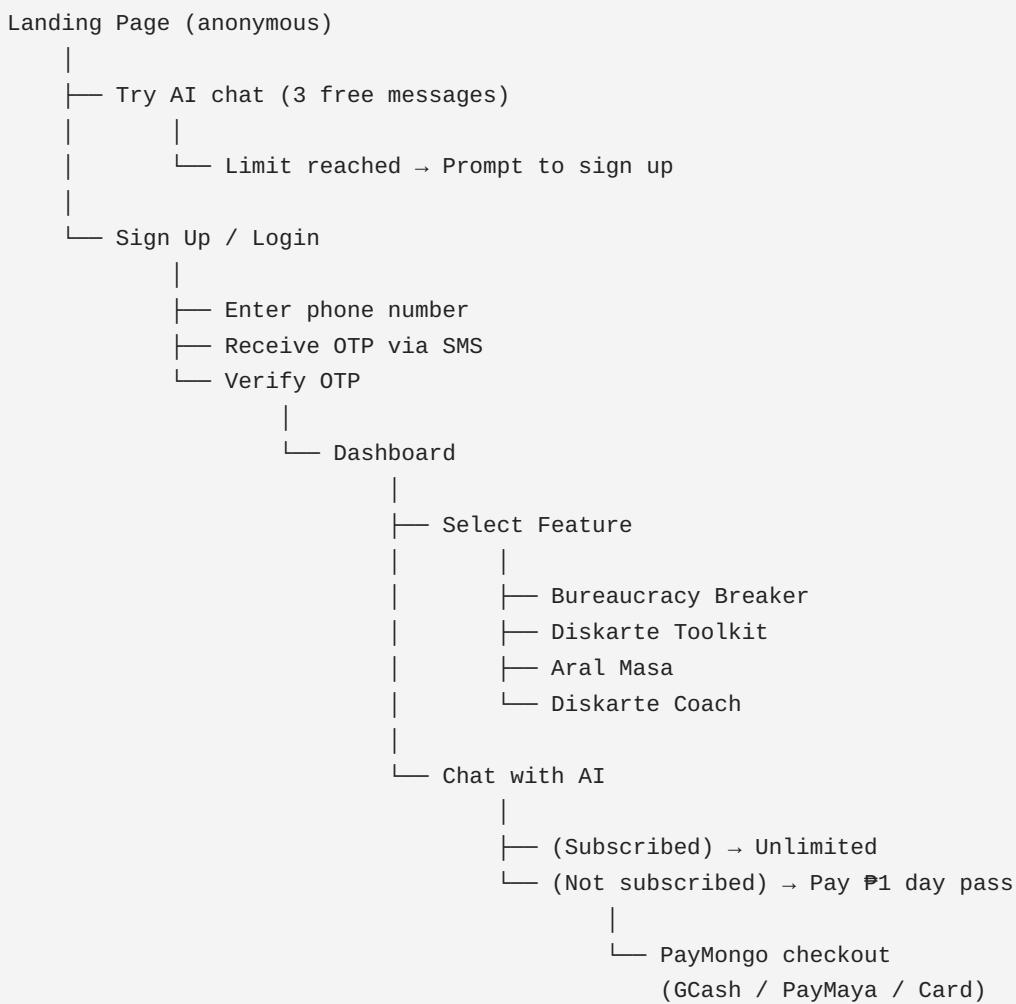
`lib/main.dart` — Initializes Firebase, sets up Crashlytics error handling, and launches the app with `LandingPageScreen` as the initial route.

### Backend (Cloud Functions)

Function	Type	Description
<code>callGemini</code>	HTTP	

Function	Type	Description
		Main AI endpoint — receives user message + feature type, loads system prompt, calls Gemini, saves response to Firestore
createCheckoutSession	Callable	Creates a PayMongo checkout session for the ₱1 day pass
handlePayMongoWebhook	HTTP	Receives payment confirmations from PayMongo, activates user subscription
getAdminStats	HTTP	Returns platform statistics (owner-only)

## User Flow



## Data Model (Firestore)

```
users/{userId}
  └── subscription_end_timestamp      # Firestore Timestamp
  └── is_active                      # Boolean
  └── last_payment_id                # Idempotency key
  └── last_request_timestamp         # Rate limiting
  |
  └── chat_logs/{featureType}/
      └── messages/{messageId}
          ├── content                  # Message text
          ├── sender                  # "user" | "ai"
          └── timestamp                # Server timestamp
```

## Security

- **Firebase Rules** enforce user-scoped data access — users can only read/write their own documents
- **Subscription fields** are protected from client-side manipulation
- **Cloud Functions** verify Firebase ID tokens on every request
- **Admin endpoints** are gated by owner UID check
- **Rate limiting**: minimum 5-second gap between AI requests
- **PayMongo webhook** signature verification prevents spoofed payments

## Deployment

Target	Command
Cloud Functions	<code>firebase deploy --only functions</code>
Firestore Rules	<code>firebase deploy --only firestore:rules</code>
Web Hosting	<code>flutter build web &amp;&amp; firebase deploy --only hosting</code>
Full Deploy	<code>firebase deploy</code>

## Key Configuration

- **Firebase secrets:** `GEMINI_API_KEY`, `PAYMONGO_WEBHOOK_SECRET`

- **Cloud Functions:** 60s timeout, 256MB memory, asia-southeast1 region
  - **Theme:** Navy blue ( #002D72 ) Material Design 3
  - **App Version:** 1.0.0+1
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