

PROJECT DISKARTE AI: MASTER PRD (SSoT v3.1)

Owner: Solo Developer / Project Manager **Architecture:** The "Trinity" (Google Antigravity, Firebase, Vertex AI) **Core Model:** Gemini 1.5 Flash (Exclusive) **Status:** Finalized Single Source of Truth - Comprehensive Version

1. EXECUTIVE STRATEGY & MISSION

1.1 Mission Statement

To democratize access to Artificial Intelligence for the Filipino "mass market" (minimum wage earners, students, job seekers) by removing the barrier of high monthly subscription fees.

1.2 The "Sachet" (Tingi) Business Model

- **The Barrier:** Most AI tools (ChatGPT Plus, Gemini Advanced) cost ~₱1,200/month, which is prohibitive for the target demographic.
- **The Solution:** Apply the Filipino "Tingi" (sachet) economy model: bite-sized, high-value AI services available for micro-payments (₱20–₱50).
- **Core Brand Promise:** "*Ang Secret Weapon ng Pinoy.*" (The Filipino's Secret Weapon). The app is not positioned as a luxury tech toy, but as a survival tool for "Diskarte" (resourcefulness) in work, school, and daily life.

2. TARGET USER PERSONA: "JUAN"

- **Profile:** 23-year-old high school graduate, job seeker, or contractual worker (e.g., service crew, warehouse encoder).
- **Location:** Often in Greater Manila Area (GMA) or provincial hubs like Cavite and Bulacan.
- **Hardware:** Low-end Android devices (Infinix, Tecno, Itel) with limited storage (~32GB).
- **Connectivity:** Relies strictly on prepaid mobile data; highly sensitive to data consumption and app size.
- **Pain Point:** Needs professional help (writing, English, advice) but cannot afford consultants or expensive subscriptions.

3. PLATFORM ARCHITECTURE (THE TRINITY)

3.1 The Google Power Base

1. **Google Antigravity:** The Architect & Coder. Leveraging AI Agents to write the code, manage instructions, and build application structure with minimal manual effort.
2. **Firebase (The "Bar Studio"):** The "Engine Room." Handles Hosting, Authentication (Phone/SMS), Firestore (Database), and Cloud Functions (Python).
3. **Vertex AI (Gemini 1.5 Flash):** The high-speed, low-cost intelligence engine with deep Taglish understanding and lowest cost per token.

3.2 Tech Stack Matrix

Component	Technology	Reasoning
IDE / Environment	Firebase Studio (Project IDX)	Browser-based IDE with Gemini built-in. No local setup needed.
Frontend	Flutter (Web) PWA	Single codebase. Responsive. Zero storage required; bypasses App Store delays.
Authentication	Firebase Auth	Supports Phone/SMS (primary) and Google Sign-in (fallback). Critical for management.
Backend Logic	Firebase Cloud Functions	Serverless Python logic; pay-per-execution. Python is ideal for AI logic.
Webhooks	Python Flask Route	Endpoint to listen for PayMongo success signals.
AI Engine	Vertex AI (Gemini 1.5 Flash)	Highest speed; multilingual support; native Firebase integration.
Database	Firestore	Real-time NoSQL; stores user wallets, timestamps, and chat logs.

4. FEATURE SPECIFICATIONS & PERSONA PROMPTS

4.1 The "MVP" Menu

1. **The Bureaucracy Breaker (Admin & Gov):** Generates formal letters and interprets government forms (Indigency requests, Barangay complaints, Mayor's office medical assistance, Passport appointments).
2. **The Diskarte Toolkit (Work & Hustle):** Professionalizes the user for employment. Includes a **Resume Fixer** (service crew to BPO-ready), **Seller Reply Bot** (Shopee/Lazada), and **Grammar Polish**.

3. **The Aral-Masa (Education):** Homework helper explaining concepts in Tagalog/English step-by-step for parents and students.
4. **The Diskarte Coach (Motivation & Grit):** A stoic, non-religious success coach focused on ambition and resilience.

4.2 Intelligence & Prompt Engineering

- **General Capability:** Primary: Taglish (Code-switching); Secondary: Cebuano/Bisaya.
- **Persona - General:** "*You are a helpful Filipino assistant. Reply in the same language the user uses. Be concise. Do not use flowery words.*"
- **Persona - Bureaucracy:** "*You are a formal correspondence expert. Use High Filipino-English suitable for government officials. Be formal and respectful.*"
- **Persona - Coach:** "*You are a stoic friend. Use 'Tropa' tone. Use slang like 'Lodi' or 'Petmalu'. Be empowering but realistic. If the user wants to quit, remind them: 'Kaya mo yan, banat ilit'.*"

5. USER JOURNEY & SYSTEM LOGIC

5.1 Onboarding & Entry

- **Channel:** Facebook Messenger links to PWA (diskarte.ph).
- **Landing:** User views a Grid Menu. Features are visible but locked/blurred until payment.
- **Auth Flow:** User logs in via Phone Number (SMS OTP). reCAPTCHA Enterprise check is mandatory to prevent bot attacks on SMS budget.

5.2 System Logic Flow

1. **Input:** User types/speaks in Taglish.
2. **Security Check:** Cloud Function checks Rate Limit (Max 10 req/min).
3. **Subscription Check:** Function checks Firestore: `if current_time < subscription_end_time`.
4. **Intelligence:** If valid, Python calls Vertex AI (Gemini 1.5 Flash).
5. **Output:** Gemini returns text; displayed instantly.

6. DATABASE SCHEMA & SECURITY (FIRESTORE)

6.1 Data Structures

- **Collection:** `users`

- uid : Unique Firebase Auth ID.
- phoneNumber : String.
- displayName : String.
- subscription_end_timestamp : Server Timestamp.
- is_active : Computed Boolean.
- **Collection:** chat_logs (Sub-collection)
 - feature_type : [Admin, Toolkit, Aral, Coach]
 - content : String.
 - timestamp : ServerTimestamp.

6.2 Security & Governance

- **SMS Protection:** Hard-cap on daily OTP messages. Firebase App Check integration.
- **Webhook Security:** paymongo_webhook MUST verify X-Paymongo-Signature header using the secret key in Environment Variables.
- **Idempotency:** Track payment_id to prevent double-crediting.
- **Data Privacy:** TTL (Time To Live) policy to auto-delete chat_logs after 30 days.

7. REVENUE & PAYMENT MODEL

7.1 Pricing Strategy

- Babad Pass (4h): ₱20
- Day Pass (24h): ₱50 (Best value standard)
- Weekly Pass (7d): ₱200
- Future Concept: "The Wallet" - Load ₱50 credits; deduct ₱1.00 per request.

7.2 The Payment Loop

- **Gateway:** PayMongo (GCash, Maya primary). Fees: ~2.5% per transaction.
 1. User pays via GCash on PayMongo link.
 2. PayMongo sends Webhook to Firebase Cloud Function.
 3. Function verifies secret and updates subscription_end_timestamp (e.g., adds 24 hours).

7.3 Profit Analysis (per ₱50 Pass)

- **Gross Revenue:** ₱50.00

- PayMongo Fee: -₱1.25
- Est. AI Cost: -₱3.00 to -₱5.00
- Hosting/SMS Overhead: -₱2.00
- Net Profit per User/Day: ~₱43.75

8. UI/UX DESIGN LANGUAGE

- Mental Model: Hybrid of GCash (Financial Trust) and Facebook Messenger (Daily Familiarity).
- Colors: Navy Blue (#002D72) and Clean White. High contrast for sunlight readability.
- Layout: 2x2 Grid Menu for MVP features.
- Thumb-Friendly: Primary elements in the bottom 60% of the screen.
- Performance: Skeleton Loaders for poor 4G/LTE; SVG icons only; system fonts (Sans Serif).
- Interaction: Ghost text placeholders and contextual Action Chips ("Gawing Formal", "Translate to Bisaya").

9. LOGISTICS & PH SCALING (PH MONTH PLAN)

- Legal: DTI Registration ("Diskarte AI Services") at bnrs.dti.gov.ph . BIR Form 2303 (COR).
- Banking: Open BPI or UnionBank account (requires personal appearance).
- Connectivity: Buy Globe/Smart SIM. Register it. Load ₱500. Text ROAM ON to 8080/333. Critical for receiving OTPs abroad.
- Funding: Apply for Google for Startups Cloud Program for \$2,000 credits. Research Angle: "Low-Resource Language Resilience in Emerging Economies."
- Scaling: Phase 1: FB Groups/PWA -> Phase 2: Barangay QR Codes -> Phase 3: Native Android APK.

10. MARKETING NARRATIVE: "A DAY IN THE LIFE"

1. **The Trigger:** Juan sees a post: "*Nahihirapan mag-English sa Resume? Gamitin ang Diskarte AI. ₱50 lang.*"
2. **The Action:** He clicks the link. It opens in Messenger. He pays via GCash.
3. **The Task (Resume):** Juan types: "*Service crew ako sa Jollibee 2 years. encoder 1 year. Gusto ko mag-Call Center.*"
4. **The Result (Toolkit):** Diskarte AI generates a polished resume highlighting "Customer Service Excellence."

5. **The Doubt (Coaching):** Juan types: "Kinakabahan ako sa interview, baka di ko kaya."
6. **The Coach:** "Normal lang kabahan, Lodi. Ibig sabihin seryoso ka. Tandaan mo: Service crew ka dati, sanay ka sa pressure. Yakang-yaka mo yan. Banat ilit!"
7. **The Outcome:** Juan gets the job. He shares the link. Viral "Diskarte" loop.

11. DEVELOPER EXECUTION GUIDE (PROMPTS)

1. **Auth:** "Scaffold a Flutter login screen using Firebase Authentication. Prioritize Phone Number login with SMS OTP. Integrate reCAPTCHA Enterprise. Ensure the user ID is passed to Firestore."
2. **Database:** "Create a Firestore schema that includes a users collection. Each user document should have a subscription_end_timestamp field and a chat_logs subcollection."
3. **Webhooks:** "Write a Python Cloud Function using Flask that listens for a PayMongo webhook. When a 'payment.paid' event is received and verified via secret key, find the user in Firestore and add 24 hours to their subscription_end_timestamp."
4. **Logic:** "Write the backend logic to check if datetime.now() is less than the user's subscription_end_timestamp. If true, call the Vertex AI Gemini 1.5 Flash API with the system prompt: 'I am a service crew member. I need to know if my shift is still valid based on current time.'"