

ANKUR BAG

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Flutter mobile engineer and founder of Orbit Innovations (MSME registered) with demonstrated experience shipping production-grade Android apps and multi-service backend systems. Built and deployed real-time, offline-first architecture on Supabase (PostgreSQL) with RLS, CDC, and sub-50 ms API latency. App published on Google Play with 200+ installs.

TECHNICAL SKILLS

Languages: Dart • Python • JavaScript • SQL • HTML • CSS

Mobile: Flutter • Android SDK • Riverpod • Drift (SQLite) • REST APIs • Offline-First • Push Notifications

Backend & DB: Supabase • PostgreSQL • Firebase • MySQL • Edge Functions (Deno) • Realtime CDC • RLS • pg_cron

Architecture: Clean Architecture • Outbox Pattern • Event-Driven • Idempotency • Monorepo (Melos) • API Design

DevOps & Tools: Git • GitHub • Vercel • Google Play Store • Sentry • Linux • VS Code

CS Core: Data Structures & Algorithms • OOP • DBMS • OS • Computer Networks

EXPERIENCE

Founder & Software Engineer

2025 – Present

Orbit Innovations – MSME Registered Startup, Mobile & Full-Stack Engineering

- ▶ Architected a **5-app Flutter + Supabase restaurant management platform** (Customer, POS, KDS, Rider, Admin ERP) on a shared Melos monorepo, coordinating a single PostgreSQL schema across all client surfaces.
- ▶ Engineered an **offline-first sync engine** using Drift/SQLite outbox queues with idempotency-keyed replay, enabling zero-data-loss order submission and automatic recovery after network interruption.
- ▶ Enforced **Row-Level Security across 54 PostgreSQL tables** and gated all payment mutations behind server-side RPCs, eliminating the entire class of client-side financial data tampering.
- ▶ Eliminated **85% of database read traffic** by replacing polling with Supabase CDC event-driven cache invalidation, reducing backend load without changing client-facing behaviour.
- ▶ Refactored the Kitchen Display System render pipeline from **O(N²) to O(1)** hash-based lookup, resolving UI frame drops under peak concurrent ticket volume.
- ▶ Designed, built, and published **ScholarX** on Google Play (200+ installs) – a Flutter + Supabase app with offline content delivery and a server-driven mock test engine for 10,000+ MAKAUT university students.

Full-Stack Engineer (Contract)

Aug – Nov 2025

Digitalindian Business Solutions Pvt. Ltd., Kolkata

- ▶ Designed and delivered a **full-stack eCommerce web application** for a US-based client – architected the PostgreSQL schema, built RESTful API integrations via Supabase, and shipped a fully responsive frontend serving real customer transactions.

KEY PROJECTS

Mother's Hut – Production Restaurant Ecosystem | Flutter • Supabase • PostgreSQL • Drift • Riverpod • Firebase • Deno

- ▶ Implemented real-time multi-app order sync via **Supabase CDC WebSockets** achieving 80 ms fanout latency; built payment reconciliation RPCs, thermal invoice generation, and GPS-geofenced delivery workflows.
- ▶ Hardened the security layer via **RLS policy enforcement** and server-side RPC validation on all payment fields; configured pg_cron data-retention jobs and a Sentry telemetry pipeline; certified **P50 API 45 ms**, PITR RTO < 30 min.

ScholarX – MAKAUT Android App [Play Store] | Flutter • Dart • Supabase • PostgreSQL • Vercel

- ▶ Sole developer – engineered offline-first content delivery, adaptive mock test engine, and CGPA calculator on a scalable Flutter + Supabase (PostgreSQL) + Vercel stack; **200+ installs on Google Play Store**.

EDUCATION

B.Tech – Computer Science & Engineering | CGPA: 7.47

Aug 2022 – Jul 2026 (Expected)

Techno International New Town, Kolkata

Higher Secondary – PCM + Computer Science | CBSE (XI–XII)

2020 – 2022

Kendriya Vidyalaya Ranaghat, West Bengal

Secondary – CBSE (Grade I–X)

2010 – 2020

Kendriya Vidyalaya BSF Krishnanagar, West Bengal

CERTIFICATIONS & ACHIEVEMENTS

Introduction to Cloud Infrastructure – Microsoft

Dec 2025

Data Analytics Job Simulation – Deloitte via Forage

Mar 2026

Internal Hackathon – SIH 2023 – Techno International New Town • MoE / AICTE

Sep 2023

Achievements: 1st Place – Jawaharlal Nehru National Science Exhibition, Regional Level (2019–20); 2nd Place (2017–18); National Level Participant (2018, 2020).