DHIRAJ NIKAM

Flutter Mobile Lead | AI & RAG Engineering | Python · TypeScript

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PROFILE SUMMARY

Mobile-first software engineer with 4+ years of experience building production Flutter apps and the AI-powered backends behind them. Combines Flutter/Dart architecture (BLoC, clean architecture, offline-first) with Python (FastAPI, Django, LangChain) and TypeScript (Node.js, React) services to deliver products end to end. Owns Sorigin's OMS, AMS and EPC apps for solar and wind operations and architected an AWS Bedrock RAG copilot whose evaluation harness improved answer faithfulness by ~30%. Shipped 8+ apps with 40K+ combined downloads; open-source author on pub.dev and the VS Code Marketplace.

WORK EXPERIENCE

Sorigin Group (Suzlon Group), Pune (Hybrid) **Jul 2025 - Present**

Senior Engineer - Full-Stack & AI

Own Sorigin's suite of production Flutter applications - OMS, AMS and EPC - and the AI copilot behind them for solar and wind operations, end to end from mobile UI and offline sync through Python and Node.js services on AWS.

- **OMS (field operations):** Built the offline-first Flutter field-operations platform (BLoC, clean architecture) used daily by O&M teams for assets, work orders, inspections and field reporting, with role-based workflows, GPS/timestamp camera capture and supervisor reassignment; in production on Android.
- **Sorigin EPC (field service):** Delivered the offline-capable field app for solar EPC site engineers - site inspections and photo-backed progress reports that queue locally and sync reliably from low-connectivity sites.
- **Sorigin AMS (analytics & monitoring):** Built the analytics and monitoring app for solar and wind assets with real-time data workflows, using Dart isolates to keep charts and dashboards responsive while processing live telemetry.
- Defined the shared Flutter design system and component library (Sovereign Emerald) used across all three apps, with bundled fonts and offline-safe assets so screens render consistently with no network.
- Architected and shipped an internal AI copilot on an AWS Bedrock real-time RAG pipeline in Python (LangChain, LangGraph) with Neo4j graph memory and source attribution; built the evaluation harness (RAGAS, DeepEval, SHAP) and tuned retrieval and embeddings to improve answer faithfulness by ~30%.
- Cut Flutter over-the-air release time by 96% (about 24 hours to 15 minutes) with Shorebird code push and CI/CD; integrated Jira, GitHub and internal tools into AI-assisted workflows via MCP servers.

Atomic Loops, Pune (Remote) **Jul 2022 - Jun 2025**

Senior Software Engineer - Flutter & Backend

Owned Flutter apps and their Node.js and Python backends for client products across fintech, e-commerce, edtech and wellness in a fully remote team; products contributed to 40K+ combined downloads.

- Owned 8+ production Flutter apps on Google Play and the App Store; defined architecture, built the mobile frontends and Node.js/Python APIs, and ran end-to-end release pipelines.
- **Brevity:** AI-powered news app with personalised Gemini-generated daily digests (Flutter, BLoC, Firebase); 20K+ downloads.
- **Nighters:** Real-time chat and location-based community platform on iOS and Android (Flutter, Stream Chat, Flutter Map); 15K+ downloads.
- **NewsCore:** AI cyber-intelligence dashboards for an enterprise SaaS product that detect risks and decode real-time signals (React, Django, LangChain, LangGraph).
- Delivered BLE integrations for EEG-based wellness products, working across the Flutter app, firmware and hardware boundaries to stream and visualise device data in real time.
- Built and published flutter_api_client on pub.dev as the shared networking layer across projects (auth flows, retries, caching, structured errors).

KEY SKILLS

- Flutter | Dart | BLoC | Clean Architecture
- Generative AI | RAG | LLM Applications
- Python | FastAPI | Django | LangChain
- TypeScript | Node.js | React
- Offline-first Sync | Dart Isolates
- AWS | Bedrock | ECS | Lambda | S3
- PostgreSQL | Redis | Neo4j | Vector DBs
- REST | GraphQL | API Design | Auth
- BLE | Camera | Hardware Integration
- CI/CD | Shorebird | App Store Releases
- LLM Evaluation | RAGAS | DeepEval
- Product Ownership | Remote Collaboration

EDUCATION

B.Tech - Computer Science

MIT ADT University, Pune, 2018 - 2022

IT SKILLS

Mobile

Flutter, Dart, BLoC, Clean Architecture, offline-first sync, Dart isolates, BLE, Firebase, Shorebird, Play Store & App Store publishing

AI & LLM

AWS Bedrock, Gemini, OpenAI, Claude, LangChain, LangGraph, RAG, embeddings, vector databases, Neo4j, OpenSearch, RAGAS, DeepEval, SHAP, MCP servers

Languages

Python, Dart, TypeScript, JavaScript, Go, SQL

Backend & APIs

Node.js, Express, NestJS, FastAPI, Django, Flask, REST, GraphQL, PostgreSQL, MongoDB, Redis, SQS/Kafka, auth flows

Frontend

React, TypeScript, Vite, Tailwind, responsive mobile-first UI

Cloud & Delivery

AWS (ECS, Lambda, RDS, S3, EKS, Bedrock), Docker, GitHub Actions, CI/CD, observability

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KEY PROJECTS

- **Sorigin OMS - Field Operations Platform** *(Flutter, BLoC, Node.js, PostgreSQL, AWS):* Offline-first field-operations platform for renewable-energy O&M teams. Covers asset management, work orders, inspections, field reporting, role-based workflows, GPS/timestamp camera capture and supervisor reassignment. Local write queue and background sync keep engineers productive at sites with no connectivity.
- **Sorigin AMS - Analytics & Monitoring** *(Flutter, Dart isolates, real-time APIs):* Monitoring product for solar and wind assets built on real-time data workflows; heavy processing runs off the UI thread in Dart isolates so live dashboards stay smooth.
- **Sorigin EPC - Field Service** *(Flutter, offline-first, AWS S3):* Field app for solar EPC site engineers: inspections and photo-backed progress reporting during construction and commissioning, synced from low-connectivity project sites.
- **AI Field Copilot** *(Python, AWS Bedrock, LangChain, LangGraph, Neo4j):* Real-time RAG over operational data with graph memory and source attribution. RAGAS/DeepEval evaluation harness turned prompt, retrieval and embedding changes into tracked experiments, lifting answer faithfulness by ~30%.
- **Brevity - AI News App** *(Flutter, BLoC, Gemini, Firebase):* Consumer news app that builds personalised daily digests with Gemini; 20K+ downloads.
- **Nighters - Community Platform** *(Flutter, Stream Chat, Flutter Map):* Real-time chat and location-based community app shipped on iOS and Android; 15K+ downloads.
- **NewsCore - Cyber-Intelligence Dashboards** *(React, Django, LangChain, LangGraph):* AI dashboards for an enterprise SaaS product that detect risks and decode real-time signals.
- **Solar & Wind WhatsApp Assistant** *(Go, Twilio, OpenAI):* WhatsApp chatbot for solar and wind project teams with per-user conversation memory, project-progress tracking and technical troubleshooting.
- **SignalForge** *(Next.js, TypeScript, SQLite):* Web, RSS and X/Twitter intelligence engine that ingests and normalises sources, then summarises, maps relationships and generates scenarios with confidence labels; runs with or without an LLM.

IMPACT

- 8+ production apps shipped
- 40K+ combined app downloads
- ~30% gain in AI-copilot answer faithfulness
- 96% faster Flutter releases (24 h to 15 min)
- 300+ installs of Commit Wizard (VS Code)

OPEN SOURCE

flutter_api_client (pub.dev)
Type-safe HTTP client for Flutter with retries, caching, request deduplication, concurrent-safe token refresh, offline write queue and circuit breaker; a spec-driven endpoint system generates a mock adapter, OpenAPI 3.1 doc and API reference from one ApiSpec. 521 passing tests.

adaptive_dual_camera (pub.dev)
Flutter plugin for simultaneous front and back capture with location and timestamp; native CameraX and AVCaptureMultiCam engines with a pure-Dart sequential fallback.

snack_pack (pub.dev)
Animated, top-aligned snack bars for Flutter with swipe-to-dismiss, queueing and responsive positioning across mobile, web and desktop.

Commit Wizard (VS Code Marketplace)
Extension that generates AI-assisted commit messages from staged diffs; 300+ installs.

Nodey
Go CLI/TUI for building and visualising flowchart logic.

SIDE PROJECTS

The Bridge
Go and Bubble Tea terminal dashboard uniting a local shell, Jira tickets, GitHub issues and PRs, and a Gemini chat in one keyboard-driven UI.

Loco - Pilot Assessment System
NestJS, MongoDB and React platform for psychometric assessment of locomotive pilot candidates, with role-based access and JWT auth.

Clawdbot Local Toolkit
Offline Piper TTS and whisper.cpp STT for WhatsApp voice notes, ReportLab PDF generation and image tools for a self-hosted AI assistant on AWS EC2.

LINKS

Portfolio: dhirajnikam.github.io
GitHub: github.com/dhirajnikam
pub.dev: dhirajnikam.dev publisher