Dhairya Oza

Software Engineer at Halma plc | Full-Stack · LLM Systems · MERN · MEAN · Flutter · Python
+91-9638878556 | ozadhairya73@gmail.com | dhairyaoza007.netlify.app | github.com/Dhairya-007 | linkedin.com/in/dhairya-oza-7723b2200

Full-stack engineer with 2+ years building web platforms (MERN, MEAN, Next.js, NestJS), **Flutter** apps for Android, iOS and Windows, **LLM systems** with RAG and agent harnesses, and **Python** data pipelines, from the database to production release.

Technical Skills

Full Stack: MERN and MEAN (MongoDB, Express, React, Angular, Node.js), Next.js, NestJS, REST APIs, Microservices
LLM & AI: Claude/OpenAI APIs, RAG, Vector Search, Agent Harnesses, Tool Calling, Prompt Engineering, n8n, BMAD/GSD
Mobile & Desktop: Flutter, Dart, Melos, React Native, .NET MAUI, BLE, Wi-Fi, LAN and Serial Communication, IoT
Languages: Python, TypeScript, JavaScript, Dart, Java, C#, C, C++, SQL
Data & Messaging: PostgreSQL, MongoDB, MySQL, SQL Server, Redis, Apache Kafka, BullMQ, ObjectBox, SQLite, LiteDB
DevOps & Tools: Docker, Kubernetes, Azure DevOps, AWS, Azure, Jenkins, CI/CD, Git, Netlify, Postman, Wrike

Work Experience

Halma plc (Sensit Technologies) July 2024 – Present
Software Engineer *Ahmedabad, India*

- **Primary developer of SyncIT**, Sensit's next-generation instrument platform on Android, iOS and Windows, retiring **5 older apps** and consolidating all their functions into SyncIT Lite and Plus; took it from proof of concept to production-ready **Flutter** MVP with a **25–30 person** team across India, the USA and Italy.
- Structured a **Melos monorepo** with two product variants on a shared core and log-parsing SDK; built **BLE, Wi-Fi, LAN and serial** modules for log download, parsing, visualization, firmware updates and multi-format export.
- Improved app performance by **30–35%** through database schema and query optimization; architected an offline-first **ObjectBox** layer with bidirectional cloud sync and automatic reconciliation for low-connectivity field use.
- Proposed and built a **.NET MAUI** settings application with the firmware team, writing ∼50 parameters to 3 instruments over BLE and eliminating over **99% of manual configuration effort** in production.
- Engineered **NestJS** REST APIs on an **Angular** platform, with **Kafka** streaming, **Redis** caching and **BullMQ** queues for high-volume sensor data; built real-time **HighCharts** wind-rose plots and correction dashboards.
- Built a custom **LLM agent harness** and **n8n** automation for internal use, and integrated agentic frameworks (**BMAD, GSD**) into the team's daily engineering workflow.
- Containerized services with **Docker** and deployed on **Kubernetes** with CI/CD; own SyncIT's full release pipeline, from build generation and versioning to packaging and distribution on every platform.
- Built a **React Native** BLE client that cut development effort by **40%** through a shared codebase; refactored a legacy UWP app and optimized LiteDB queries for up to **75% faster** load times.
- Built Windows-scheduled reporting for LAN devices, multi-template report generation, calibration-station workflows, device lifecycle management and Gantt-chart timelines; reworked UI and navigation from wireframes with the engineering manager.
- **Mentor juniors and colleagues**, and create and distribute team tasks in **Wrike**, working with USA-based product managers, firmware engineers and QA to ship production-ready releases.

Halma plc Jan 2024 – June 2024
Software Engineer Intern *Ahmedabad, India*

- Built **.NET MAUI** apps for Android and iOS with BLE instrument communication and offline-first cloud sync with conflict resolution, and produced wireframes and UI/UX designs with product managers.

Barclays May 2023 – July 2023
Business Analyst (BA4) Intern *Pune, India*

- Built a **Java** and **Selenium WebDriver** test framework that raised coverage across critical workflows by **90%**, and integrated it with **Jenkins** CI/CD to run on every commit in an Agile team.

Projects

- **agent-harness** *(TypeScript, Zod, Anthropic SDK)* [link]: Typed **LLM agent harness** for Claude with validated tool inputs, approval gates, context budgeting and a verification pass; **39 tests**.
- **rag-service** *(NestJS, Next.js, TypeScript)* [link]: Grounded document Q&A with hybrid **BM25 and dense retrieval** and rank fusion; answers that cite no source are rejected and retried; **52 tests**.
- **Lights Out** *(Python, NumPy, pytest, JavaScript)* [link]: **Python** pipeline that compiles F1 races into shareable 3D browser replays and detects key moments, cutting false passes at the 2025 Monaco GP from **72 to 12**.
- **Billber** *(React, TypeScript, Vite, PWA)* [link]: Offline-first expense splitter with integer-only money logic.
- **Citrine Growth** *(Next.js 14, NestJS, Prisma, PostgreSQL)* [link]: Agency site with a full admin panel.
- **Also in Angular:** Detonate the Bomb (**50** levels), F1 dashboard portfolio (**10+** animations), Siddheshwari Investment.

Education

B.Tech, Computer Science and Engineering, SVNIT Surat 2020 – 2024
CGPA 9.19/10, ranked 5th of 135 *Class XII 80% (2019), Class X 96% (2017)*

Achievements

- JEE Mains 2020: AIR **8886** (99.22 percentile among 1.1M). JEE Advanced 2020: AIR ∼10k (95+ percentile among 1.6 lakh).
- ACM NIT Surat Executive (hackathons, technical sessions for juniors); MLSA NIT Surat Junior Developer (event websites).