DEEPAK JHA

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ABOUT

Second-year engineering student seeking a software development internship with a focus on backend systems, distributed services, and applied algorithms.

SKILLS

Languages:	Kotlin, JavaScript, TypeScript, Python, C++, HTML, CSS
Frameworks/Libraries:	React Native, Jetpack Compose, Node.js, React.js, Next.js, MongoDB, Firebase
Tech:	Git, Postman, Linux, OpenStreetMap, QGIS, Docker, LaTeX
Core CS:	Data Structures & Algorithms, Object-Oriented Programming, Operating Systems, Database Management Systems, Computer Networks

EXPERIENCE

Backend / Android Intern Nov 2025 – Dec 2025
Tinkering Hub, Parul University

- Architected backend services for an AR/VR application to stream optimized imagery, execute an image-to-panorama pipeline, and evaluate **COLMAP** and **HLOC** for high-precision localization.
- Integrated an AR module using **ARCore**, **SceneView**, and **Kotlin** to anchor 3D navigation routes onto real-world surfaces.

PROJECTS

CampusFind [(Try it here)]()
Built a campus navigation system using **Next.js**, **MapLibre GL**, and **Supabase**, implementing GPU-accelerated maps, weighted **Dijkstra routing**, and sensor-driven orientation to enable real-time multi-route navigation with offline **PWA** support.

- Deployed GPU-accelerated map rendering with **OpenStreetMap**, **MapLibre GL**, and GeoJSON.
- Designed weighted graph-based routing using **Dijkstra's algorithm** for optimal path selection.
- Integrated **device orientation sensors** to render real-time AR directional guidance.
- Delivered an offline-first **PWA** using **Next.js**, **Supabase**, and **ImageKit CDN**.

Medical Emergency Service App
Built an Android application to provide real-time assistance during medical emergencies through location-aware routing and hospital discovery.

- Developed in **React Native** using **MapLibre** for map rendering and **Valhalla** for route generation, integrated with **Google Maps APIs**.
- Rendered and queried a dataset of **200K+ hospitals** across India with optimized map performance and low-latency search.

NamasteSetu [(Try it here)]()
Built an **AI-driven** dual medicine coding microservice for industry-standard EMR systems using **Node.js**, leveraging embeddings and **semantic search** to bridge WHO traditional medicine with **ICD-11** standards via **25+ RESTful APIs**.

- Implemented a **RAG pipeline** with **fuzzy search**, enabling accurate diagnosis retrieval across **40K+ records** with **sub-100ms latency**.
- Containerized a modular backend and frontend using **Docker** and **PostgreSQL**, and validated performance through **Artillery load testing**.
- Designed a modern, responsive UI using **Tailwind CSS** and **shadcn/ui** components.

ACHIEVEMENTS

- **Smart India Hackathon (SIH)** University Finalist; ranked **3rd** in the second round and placed in the **top 45** of the final round among **730** university teams.

EDUCATION

Bachelors of Computer Science, Parul University Expected 2028