

ASHISH S. WAIKAR

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EDUCATION

M.Sc. Computer Science

Nagpur, Maharashtra, India

Shri Shivaji Education Society Amravati's Science College (RTM University)

Jul 2022 - Jul 2024

Relevant coursework: Software Engineering, Database Management Systems, Data Structures and Algorithms, Operating Systems, Data Mining, Artificial Intelligence, Deep Learning.

B.Sc. Physics, Math & Computer Science

Nagpur, Maharashtra, India

St. Francis De Sales College (RTM University)

Jun 2019 - Jul 2022

SKILLS

Languages & Tools: Javascript, Python, HTML, CSS, PostgreSQL, MongoDB, Git, Github

Libraries and Frameworks: React.js, Flask, Express, Node.js, FastAPI

EXPERIENCE

Hackathon Winner & Lead Developer (Pebble AI)

Nagpur, Maharashtra, India

Mineral Exploration and Consultancy Ltd.

Mar 2024 - Jun 2024

- Developed a **responsive chat UI** and **backend architecture** for NGDR Geochemistry data, enabling users to generate Kriging and IDW maps from text prompts, reducing manual processing time by **80%**.
- Implemented a **Retrieval-Augmented Generation (RAG)** system using **Gemma LLM** for improved legal information retrieval, semantic search, and query responses.

Frontend Developer (Internship)

Remote

Indian Institute of Technology, IIT Kharagpur

Jul 2022 - Dec 2022

- Developed **Digital Health One web portal** web application with **React.js** and **Chakra UI** during a self-directed internship at **KLIV Research Group, IIT Kharagpur**, enhancing user experience and accessibility.
- Translated **Figma designs** into responsive React.js components, ensuring seamless UI across devices.
- Optimized performance by implementing **lazy loading**, reducing initial load time by **~30%**.

PROJECTS

PixlFlip Flashcards App | [Github](#) | [Demo](#)

- Built a **RESTful backend API** for PixlFlip, an **AI-powered** flashcard and learning platform using **Node.js**, Express, **Gemini API** and **MongoDB**.
- Enforced **rate limiting**, integrated **Google Gemini** with structured JSON schema parsing and defensive error handling. Implemented **JWT-token based Auth** + a **per-user credits system** that decrements on AI usage.
- Documented **API contracts and constraints**, and leveraged **AI development tools** to accelerate frontend development aligned with those specifications.

Code-Mini CLI | [Github](#)

- Implemented a lightweight **autonomous coding agent** with a **terminal CLI interface** and **tool-calling** architecture with **Python**.
- Developed **modular tool registry** and interactive UX with progress feedback and configuration that works with **local LLMs** via **LM studio**.

ACHIEVEMENTS

- Led a team of 5 in the **MECL Hackathon 2024**, securing **2nd place** win with **Pebble AI** chatbot.