

ATHARVA NAGANE

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EDUCATION

Vellore Institute of Technology B.Tech- Computer Science and Engineering CGPA: 9.10	Bhopal, Madhya Pradesh 2023- Expected 2027
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PROFESSIONAL SUMMARY

I am a Computer Science undergraduate mastering scalable full-stack systems and advanced machine learning. I excel in natural language processing, distributed architecture, and REST API innovation, delivering AI-driven legal solutions and real-time medical diagnostics. Fueled by a passion to redefine real-world challenges through robust system design and user-centric solutions.

TECHNICAL SKILLS

- Programming Languages:** Python, JavaScript (ES6), Java, C++, C
- Frontend:** React.js, Vite, HTML5, CSS3, Axios, React Router
- Backend and Databases:** Node.js, Express.js, Flask, RESTful APIs, JWT, MongoDB, SQL, Mongoose
- Machine Learning Frameworks:** TensorFlow, Keras, Scikit-Learn, LangChain, NLTK, OpenCV
- Tools & Libraries:** Docker, Kubernetes, Jenkins, Git, GitHub, Pandas, NumPy
- CS Fundamentals:** Data Structures, Algorithms, Operating Systems, DBMS, OOP

PROJECTS

- Legal Aid Provider LLM -Context-Aware Legal Query System**
LangChain, OpenAI, Python, Flask, RAG Pipeline, GPT-3.5-turbo
 - Pioneered a **Retrieval-Augmented Generation (RAG) model** using **LangChain** and **OpenAI embeddings** to process NLP-driven queries on legal documents like the Indian Penal Code and Consumer Protection Act 2019.
 - Engineered a document processing framework utilizing text splitters to categorize and retrieve legal documents, leading to an increase in document accessibility by 30% and expediting case preparation for legal teams.
 - Integrated **GPT-3.5-turbo** for generating context-aware legal advice, reducing processing time by **25%**.
 - Revamped scalable NLP pipeline with modular architecture, enabling efficient information retrieval for 1,000+ concurrent users.
- BiteBook – Full Stack Recipe Sharing Platform**
React.js, Node.js, Express.js, MongoDB, JWT, Vite, Axios, REST APIs
 - Built a full-stack MERN web app for sharing and managing user-contributed recipes, supporting 500+ users.
 - Implemented JWT-based authentication with bcrypt password hashing, cutting unauthorized access by 98%.
 - Created RESTful APIs with CRUD functionality, handling up to 2000 daily API requests for stable user interaction.
 - Launched responsive UI with search, pagination and role-based dashboards, boosting engagement by 40%.
- Pneumo-Care – Pneumonia Detection Web Application**
TensorFlow, Keras, Pillow, Flask, Seaborn, HTML5, CSS3, Render
 - Developed a pneumonia detection web application using TensorFlow and Keras, achieving **80.66% accuracy**.
 - Leveraged **Pillow** for image preprocessing and **Seaborn** for visualizing performance metrics.
 - Deployed the app on **Render** platform, making it globally accessible and scalable for users worldwide.
 - Reduced false positives by 15%** by **fine-tuning the model** with data augmentation techniques like rotation.

CERTIFICATIONS & ACTIVITIES

- Oracle AI Vector Search Certified Professional (OCP).**
- Cleared internal university rounds for **SIH 2024** and ranked among the **top 50 teams** preparing for the Nationals.
- Solved **150+ Data Structures and Algorithm problems** on **LeetCode** platform.

EXPERIENCE

- Full Stack Developer Intern – Imarticus Learning**
May 2025 – June 2025 | Remote | Team of 4
 - Spearheaded the development of an internal LMS platform using MERN, enabling progress review for 12+ sections.
 - Engineered RESTful APIs with Express.js and MongoDB (via Mongoose), fortified JWT-based authentication and role-based access control; APIs processes 10,000+ requests per minute with 99% uptime in a distributed environment.
 - Liaised a responsive React frontend, utilizing WebSockets to ensure scalable, distributed data synchronization with real-time dashboard updates; deployed both frontend and backend on Vercel serverless platform, achieving 99.9% uptime and supporting scaling for up to 1000 daily active users.
 - Led CI integration through GitHub workflows, implementing parallel testing and builds to enhance deployment time by 25%, while contributing to weekly code reviews that improved code quality by identifying 15+ bugs per sprint.