

Shan Shaji

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Profile Summary

Passionate and curious **Full-Stack Engineer** with hands-on experience in building web applications using the MERN stack and integrating LLM-based features. Skilled at translating product problems into scalable technical solutions and building end-to-end systems. Thrives in fast-paced, collaborative startup environments and eager to contribute to product development and AI-assisted features.

Technical Skills

Web & Frontend MERN Stack (MongoDB, Express.js, React.js, Node.js), HTML, CSS, Bootstrap

AI & LLMs Large Language Models (LLMs), OpenAI / Gemini APIs, Prompt Engineering

Experience

Software Engineering Intern

Mar 2024 – Apr 2024

Luminar Technolab, Kochi, Kerala

- Built interactive dashboards and full-stack components for student analytics platforms.
- Improved backend performance by optimizing processing logic and reducing latency by 20%.
- Collaborated with cross-functional teams contributing to both UI and backend development.

Software Development Intern

Jul 2023 – Aug 2023

Cochin Smart Solutions, Ernakulam, Kerala

- Automated data workflows integrating Node.js and MongoDB to improve reporting efficiency.
- Implemented REST APIs and backend modules for client dashboards.
- Participated in testing, debugging, and documenting features in a fast-paced environment.

Projects

Bello – Real-Time Messaging & Video Conferencing Platform — *React.js, Tailwind CSS, Node.js, MongoDB, WebRTC, ZegoCloud, Ethereum, IPFS, OpenAI APIs*

- Built a real-time messaging and video conferencing platform with seamless chat, high-quality voice/video calls, and productivity tools.
- Integrated AI features including multilingual translation, message summarization, text-to-speech, and an AI personal assistant (Gemini/OpenAI).
- Implemented decentralized message backup: messages stored on IPFS with CIDs written to the Ethereum blockchain; supported restore via CID.
- Added encrypted user authentication backup via IPFS-based email storage; integrated Spotify Web API for in-chat music sharing.
- Tech Highlights: React.js, Tailwind CSS, Node.js + Express, MongoDB, WebRTC/ZegoCloud, IPFS (Pinata), Ethereum, OpenAI APIs, Google Translate API, Spotify Web API.

AI-Based Student Engagement Monitoring System — *React, Node.js, MongoDB, MediaPipe, OpenCV, WebRTC, Whisper/Google STT, OpenAI API*

- Developed an educational platform that analyzes student engagement during live classes by computing Eye Aspect Ratio (EAR) from webcam streams and classifying engagement using an ML model.
- Implemented real-time transcription/subtitles for teacher speech using Whisper / Google Speech-to-Text to generate live captions.
- Integrated an LLM-based chatbot (OpenAI/Gemini) to provide on-demand doubt resolution for students.

- Built secure teacher workflows for uploading/downloading course notes; implemented frontend video stream handling via WebRTC.
- Engineered full-stack architecture with React frontend, Node.js/Express backend, MongoDB storage, and Python-based CV/ML services (MediaPipe + OpenCV).

Restaurant Tip Predictor — *JavaScript, Node.js*

Built an ML-powered predictor integrated into a simple web UI for estimating tip amounts based on customer attributes.

Education

Bachelor of Technology (B.Tech) in Computer Science
APJ Abdul Kalam Technological University, Kerala

2022 – Present

Additional Highlights

- Strong interest in **LLMs**, generative AI, and building practical AI-assisted products.
- IEEE Member — Participated in hackathons, workshops, and AI study groups.
- Comfortable working in startups and collaborating with technical and non-technical stakeholders.
- Passionate about full-stack development, scalable systems, and continuous learning.