

Sanjay Marathe

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EDUCATION

University of California, Irvine

Irvine, CA

Bachelors of Science in Computer Science and Intelligent Systems

Expected Graduation, June 2027

- **Organizations:** UROP Research Fellow, Association for Computing Machinery, Cyber @ UCI, Hack @ UCI

EXPERIENCE

HLS Tech Solutions

San Diego, CA

Founder, Lead Software Engineer

Jan 2025 – Sep 2025

- **Founded** and **scaled** a web development firm, delivered custom webapps for **10+** clients, increasing average client engagement by **30%+** through site optimizations, **awarded** recognition by Nextdoor's Business Board
- Built the SoulSatsang web platform for a well-recognized spiritual community, serving **2.5k+** members, supporting **100+** workshops across North America, and highlighting community leaders with awards for exceptional service.
- Designed deployment and CI/CD pipelines on AWS, Vercel, Docker, and Cloudflare, refactoring databases and caching to reduce server costs by **20%** while supporting up to **1,000** concurrent connections

Doozie Software Solutions

Bangalore, KA, IN

Software Engineering Intern

Jun 2024 – Sep 2024

- **Developed** **kiruthirupathi.org**, a temple management platform with features for event scheduling, donations, and contact management; serving **500+ users** and automating **70%** of routine administrative tasks.
- Engineered secure, PCI-compliant Stripe proxy server integration with async request handling and fault-tolerant design, enabling global donor transactions and raising **\$250K+** in funding for a major temple in India.
- Integrated the Meta WhatsApp Cloud API to automate community announcements and event reminders, resulting in **200+** active rural temple users and significantly improved donor engagement and event participation

PROJECTS

DrystAI (Google Gemini Hackathon Finalist, SHACK15, 2025) | *Next, FastAPI, MongoDB Atlas, OpenCV, Tavily*

- Used DeepGram and Gemini AI to transcribe real-time conversations and generate **3,072-dimensional** embeddings stored in MongoDB Atlas, achieving **85%** accurate semantic retrieval and linking context to recognized faces
- Used OpenCV with FastAPI/Uvicorn to process live video frames for speaker detection and facial recognition, delivering **90%** classification accuracy with smooth real-time streaming to a Next.js frontend
- Used Gemini AI embeddings in MongoDB Atlas Vector Search to perform cosine similarity retrieval across **5,000+** embeddings, achieving **90%** top-1 accuracy and **sub-100ms** query latency for RAG-enabled applications

Boredtutors.com | *React, Node, MySQL, AWS Lambda*

- Developed a full-stack district-wide tutoring platform connecting **250+ students** with **50+ peer tutors**.
- Implemented secure RESTful APIs with JWT authentication, database encryption, and an admin dashboard; later automated tutor verification workflows, cutting manual approval time by **75%**.
- Deployed a scalable cloud architecture on Kubernetes with automated load balancing and failover, ensuring **97.9%** uptime and seamless handling of concurrent user traffic.

MeDisha (AWS Agentic AI Hackathon Winner, 2025) | *Next, AWS Bedrock, Pinecone*

- Used Agentic AI and AWS Bedrock vector storage to revolutionize clinical trial matching, resulting in fast, accurate patient-to-trial matching based on comprehensive medical profiles and simplified eligibility criteria
- Used algorithmic ranking to optimize trial site selection, resulting in smart location recommendations based on availability and transparent cost estimations for out-of-pocket versus sponsor-covered expenses.

TECHNICAL SKILLS

Languages: Java, Python, JavaScript (ES6+), SQL, Go, C++

Frameworks & Platforms: React, Node.js, Express, AWS Lambda, Django REST Framework, FastAPI

Databases: PostgreSQL, MySQL, Prisma/Sequelize, Redis (caching)

AI/ML & Libraries: PyTorch, TensorFlow, NumPy, LangChain, LangGraph