

NAREN S J

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EXPERIENCE

Datavex AI

Sep 2026 – Present

AI/ML Engineering Intern, Mangalore, Karnataka

- Developed an AI-powered **2D-to-3D CAD reconstruction pipeline** using **Gemini Vision** to extract engineering dimensions and features from mechanical drawings.
- Built the **CAD-IR to 3D geometry pipeline** using **Python, FastAPI, OpenCascade**, with validated B-Rep generation and interactive 3D visualization.

Sahynex Tech Solutions

Oct 2025 – Aug 2026

Software Developer Intern, Mangalore, Karnataka

- Designed and deployed full-stack platforms serving **10K+** users, implementing scalable **RESTful APIs** and **secure authentication** systems.
- Optimized frontend and backend performance, reducing average page load time by **35%**.

ISDC - Innovex Student Developer Community

Sep 2025 – Present

Technical Head (Promoted from Web Development Lead, Feb 2026), Mangalore, Karnataka

- Lead architecture and engineering execution across **10+ production-grade** platforms, overseeing system design, code quality, and deployment strategy.
- Mentored and managed a team of developers, conducted **technical interviews** and structured **peer reviews** to maintain engineering standards.

PROJECTS

• SPManger

Next.js, Cloudflare R2, MongoDB, Docker, Kubernetes, Github API, Socket.io, Redis

- Built an AI-powered project management platform reducing manual effort by **80%**.
- Integrated **RAG Model** to analyze requirement document and auto-assign tasks based on skill matching.
- Implemented real-time collaboration using **Socket.io & LiveKit**, reducing communication delays by **90%**.
- Engineered a scalable backend handling concurrent multi-user workflows using **Bloom filters**, reducing unnecessary database lookups and optimizing API throughput.

• VoteStack

C++, PostgreSQL, Redis, Docker, nginx, Prometheus

- Engineered a high-performance C++ online voting platform using **epoll**, thread pools, and non-blocking I/O.
- Architected scalable infrastructure utilizing **Nginx** load balancing, **Redis** caching and Prometheus-Grafana.
- Implemented **PBKDF2-SHA256** auth, Redis sessions, and atomic transactions preventing duplicate voting.
- Optimized throughput and achieved low latency using connection pooling, rate limiting and async processing.

• CRIMSON

Next.js, FastAPI, MongoDB, Python, AI/ML, Neo4j, Docker

- Built an AI-powered criminal network analysis platform for **analyzing, and identifying complex criminal networks**.
- Implemented **graph-based relationship analysis** to uncover connections between suspects, organizations, cases, locations, and criminal activities.
- Integrated **AI-driven entity extraction and risk analysis** to transform unstructured data into actionable intelligence.
- Engineered an interactive investigation dashboard with **network and geographic mapping, and AI-assisted insights** for faster investigative analysis.

RESEARCH

Cryptographic Offline Payment Protocols & Chip Architecture

Ongoing

- Developing a secure token-verification scheme to prevent double-spending in **offline P2P transactions**.
- Evaluating low-latency cryptographic hardware for on-device verification without network round-trips.

TECHNICAL SKILLS

- **Languages:** JavaScript, TypeScript, Python, Java, C/C++.
- **Frameworks & Runtime:** React.js, Next.js, Node.js, Express.js, Tailwind CSS, Socket.IO.
- **Databases & Cloud:** MongoDB, PostgreSQL, MySQL, Firebase, Redis, Azure, Cloudflare R2, Supabase.
- **Tools:** Linux, Git, Docker, Kubernetes, Postman, Figma, Render, Railway, Grafana, Prometheus, n8n.

EDUCATION

Sahyadri College of Engineering and Management

Oct 2024 – Present

Bachelors in Information Science Engineering, Mangaluru, Karnataka

(Expected Graduation: 2028)

- **Relevant Coursework:** DSA, DBMS, OOPs, OS, Computer Networks, Information Storage Management.

ACHIEVEMENTS

Winner — HackHarbor 3.0 | Winner — GDG TechSprint | Finalist — BuildForBillion (Incub8) | Finalist — AWS AI Prompt Challenge | Semi-Finalist — EY Techathon 6.0, India | Best Innovative project award - Versathon 1.0. | 2× SIH College Finalist