Satyajit Sahoo

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Summary

Computer Science undergraduate specializing in Full Stack and AI-powered backend systems. Designed and deployed scalable applications using React, FastAPI, Node.js, and Retrieval-Augmented Generation (RAG) architectures. Experienced in REST API design, asynchronous programming, real-time systems, vector search optimization, and cloud deployment. Solved 500+ algorithmic problems and actively participate in competitive programming. Seeking Software Engineering Internship roles.

Education

Bachelor of Science in Computer Science   Aug 2023 – Mar 2026
Radhanath Rath Vigyan Degree Mahavidyalaya, Utkal University   *Odisha, India*
– CGPA: 8.7/10.0 — Coursework: Data Structures, Algorithms, DBMS, Operating Systems, Computer Networks

Technical Skills

Languages: Java, Python, JavaScript, SQL, HTML5, CSS3
Frontend: React.js, Redux, Tailwind CSS, Material UI
Backend: Node.js, Express.js, FastAPI, REST APIs, WebSockets, Socket.io
Databases: MongoDB, MySQL, Qdrant Vector Database
DevOps & Cloud: Docker, Kubernetes, Git, GitHub Actions, CI/CD, AWS, Render, Vercel
AI/ML: LangChain, LangGraph, RAG Architecture, Prompt Engineering, Gemini API

Core Competencies

System Design Fundamentals, REST API Design, Asynchronous Programming, Event-Driven Architecture, WebSockets, Vector Search Optimization, Retrieval-Augmented Generation, Database Indexing, Authentication & Authorization, CI/CD Pipelines, Cloud Deployment

Technical Projects

Oceanum Library – AI Document Intelligence Platform — Live Demo
– Architected document intelligence platform implementing RAG pipeline over 1,000+ documents
– Optimized Qdrant vector search reducing query latency by 40% through improved retrieval ranking
– Built multi-agent workflows using LangGraph with persistent memory and state management
– Implemented backend with FastAPI including async request handling and structured validation
– **Stack:** React.js, FastAPI, Python, LangChain, LangGraph, Qdrant, Gemini API, Docker

Stock Mates – Real-Time Trading Simulation Platform — Live Demo
– Developed real-time trading system supporting concurrent WebSocket connections
– Engineered event-driven architecture using Socket.io for trade execution and live notifications
– Optimized MongoDB queries using indexing reducing API latency by 70%
– Implemented secure JWT-based authentication and scalable REST APIs
– **Stack:** React.js, Node.js, Express.js, MongoDB, JWT, Socket.io

Meena GPT – Conversational AI Application — Live Demo
– Built conversational AI system integrating Gemini API with persistent session management
– Designed modular backend improving maintainability and reducing code duplication
– Automated deployment using CI/CD pipelines with GitHub Actions
– **Stack:** React.js, Node.js, Express.js, MongoDB, Gemini API

Confer-X – WebRTC Video Conferencing Platform — Live Demo
– Engineered peer-to-peer WebRTC conferencing system supporting multi-user sessions
– Implemented signaling server using Socket.io with optimized room management
– Integrated AI-powered meeting summarization using Gemini API
– Performed load testing maintaining stable multi-room concurrency
– **Stack:** React.js, Node.js, WebRTC, Socket.io, MongoDB

Achievements & Certifications

- Ranked 1421 globally among 20,000+ participants in LeetCode Weekly Contest
- Solved 500+ algorithmic problems (LeetCode 350+, GeeksforGeeks 150+)
- HackerRank Certified: Problem Solving (Advanced), JavaScript (Intermediate), Python (Basic)
- Certified in Full Stack Development and Generative AI (RAG, LangChain)