

# 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

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

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](#)

- Designed RAG pipeline processing 1,000+ documents using semantic embeddings
- Reduced retrieval latency by 40% via vector index optimization in Qdrant
- Orchestrated multi-agent workflows with contextual memory handling
- Structured asynchronous backend services using FastAPI
- **Tech Stack:** React.js, FastAPI, Python, LangChain, Qdrant, Gemini API

### Meena GPT – Conversational AI Application — [Live Demo](#)

- Created session-aware chatbot platform powered by Gemini API
- Enhanced response coherence through contextual prompt structuring
- Streamlined release cycles using automated CI/CD workflows
- **Tech Stack:** React.js, Node.js, Express.js, MongoDB

### Confer-X – WebRTC Video Conferencing Platform — [Live Demo](#)

- Engineered peer-to-peer conferencing solution supporting multi-user sessions
- Configured signaling architecture with Socket.io for synchronized media exchange
- Embedded AI-driven meeting summaries via Gemini API
- Validated concurrency stability through load simulation
- **Tech Stack:** React.js, Node.js, WebRTC, Socket.io, MongoDB

### Earthy – Full Stack Hotel Booking Platform — [Live Demo](#)

- Constructed reservation platform covering listings, bookings, and reviews
- Exposed structured REST endpoints for property management
- Secured routes using token-based authentication and role validation
- Improved query efficiency through indexing strategies
- Launched production deployment using Render with environment isolation
- **Tech Stack:** Node.js, Express.js, MongoDB, EJS

## 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)