

# Lokadithya Matti

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## About

Computer science student with experience in backend and full-stack development. focused on building scalable systems and solving algorithmic challenges. Motivated by research-driven growth and a strong interest in foundational and applied CS problems.

## Education

**Sreenidhi Institute of Science and Technology.**

B.Tech in Computer Science and Engineering

November 2022- May 2026 (expected)

Current CGPA: 8.8

## Projects

### Nowlite – A Management Platform(SAAS).

- **Description:**Architected the core backend and frontend structure to optimize for modularity and future feature expansion.
- Implemented SWR-based polling to simulate real-time ticket updates in the absence of WebSockets.
- Built secure role-based authentication and in-app messaging from first principles—no third-party auth or chat libraries.
- Integrated Gemini AI to enable natural language-based incident ticket generation.
- Prioritized desktop MVP; mobile responsiveness and WebSocket-based real-time messaging are under development.
- System refactor improved throughput by ~3x, with infrastructure designed to scale horizontally to support ~10,000 concurrent users under typical load (read-heavy, chat-light use cases).

[Demo](#)

### Hollow: making shopping easy(E-commerce).

- **Description:** Built an AI-driven e-commerce search engine using Next.js, MongoDB, Redis, SerpAPI, and Gemini for real-time product discovery and analysis.
- Implemented dual Gemini agents to convert user prompts into search keywords and generate comparative product insights dynamically.
- Integrated live scraping and caching logic to support responsive, open-ended product queries with fast data retrieval and evaluation.

[Demo](#)

### Awake - Personal Productivity AI Platform

- **Description:**Built a lightweight, modular system to track user goals with low overhead and scalable structure.
- Engineered a WhatsApp-style chat interface to enable real-time mentor–mentee communication.
- Integrated Gemini-based natural language assistant to generate dynamic insights and actionable feedback.
- Implemented custom auth flow with Iron Session for stateless, secure user session management.
- Deployed via Vercel for fast global delivery and auto-scaling across user spikes.

[Demo](#)

## Skills

### • Languages

C, Java, Python, TypeScript, React

### • Frame works and libraries

NextJS, Flask, Tailwind CSS

### • Databases & Backend

MongoDB, Redis, SQL

## Coding Profile

- LeetCode Rank: Top 16.35%

globally

- Problems Solved: 800+

- Ranked at 33,000

• [link: leetcode](#)

## Achievements

- Qualified Gate 2025.
- NPTEL certifications in Java, C and problem solving with C.

## Research Exploration

- TSP Optimization with Genetic Algorithms
- Enhanced traditional GA performance on the Traveling Salesman Problem by introducing data segregation and multi-round input feeding, resulting in more stable convergence.
- Reinforcement Learning–Based Job Scheduling
- Developed a custom scheduling algorithm by integrating RL agents with GRASP-inspired heuristics, improving allocation efficiency under dynamic workloads