

# Pavan Agulla

✉ [Pavanagulla19@gmail.com](mailto:Pavanagulla19@gmail.com) ☎ +91 9603032125 📞 [pavanagulla.netlify.app](https://pavanagulla.netlify.app) 🌐 [pavanagulla](#) 🌀 [Pavanagula-19](#)

## Projects

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### Presento - Notes Application

**Technologies Used:** MERN Stack, JWT, TypeScript, Tailwind

- Developed a secure full-stack note-taking platform, increasing user retention by **40%**.
- Implemented JWT-based authentication for **500+ active users**, reducing unauthorized attempts by **30%**.
- Enhanced MongoDB queries and indexing, achieving **99.9% uptime** and reducing query times by **50%**.
- Incorporated real-time synchronization of notes across devices, reducing sync time from **1.2s to 300ms**.
- Designed a fully responsive UI with Tailwind CSS, leading to a **25% increase in mobile user engagement**.

### Zint - Real-time Music Sharing

**Technologies Used:** React Native, WebSockets, Node.js, MongoDB

- Designed a real-time music app using WebSockets, reducing playback sync delay from **500ms to 50ms**.
- Built a cross-platform UI using the Expo framework, increasing user engagement by **35%**.
- Improved API performance, decreasing latency from **700ms to 200ms**.
- Implemented a queue system with real-time updates, enabling **5,000+ song additions per day**.

### Social Media Platform

**Technologies Used:** MERN Stack, WebSockets, JWT, Caching

- Scalable platform supporting **3,000+ concurrent users** with real-time messaging.
- Achieved **40% faster load times (3.0s → 1.8s)** through lazy loading and refined API responses.
- Integrated caching (Redis) and MongoDB indexing, accelerating API response time from **500ms to 180ms**.
- Developed an activity feed dynamically updating, leading to a **60% increase in daily active users (DAU)**.

## Achievements

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### NASSCOM Certified (NSQF Level 5)

- Ranked in the top **10%** of the cohort with a score of 88.
- Diagnosed and resolved a critical downtime issue within **2 hours**, showcasing strong problem-solving skills.
- Contributed to open-source MERN stack projects, receiving recognition from community maintainers.

### Hackathon Finalist

- Placed in the top **5 out of 200+** in a competitive hackathon.
- Led a team to develop an innovative solution with strong technical complexity.

## Technical Skills

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**Programming:** JavaScript, TypeScript, C++

**Backend:** Node.js, Express.js, WebSockets

**Frontend:** React.js, Redux, Next.js, React Native

**Version Control:** Git, GitHub, GitLab, Bitbucket

**Data Structures:** Trees, Graphs, Hash Tables, Dynamic Programming

**Frameworks:** Next.js, React Native, Tailwind CSS

**Cloud & DevOps:** AWS, Docker, Kubernetes

**Databases:** MongoDB, PostgreSQL, Redis, Firebase

**Tools:** Postman, GraphQL, Swagger, Nginx, Prometheus

## Education

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**Sphoorthy Engineering College, Hyderabad, Telangana (2017 - 2021)**

B.Tech. in Computer Science and Engineering (Top 10%)

**Relevant Courses:**

OS, Data Structures, Algorithms, Networking, Databases, Software Engineering, Web Development