

# HARSHA B R

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## About Me

Dynamic software developer with a proven track record of designing innovative, user-focused solutions. Expert in full-stack development and AI-driven system optimization, having boosted resource efficiency by 20% through machine learning models in virtualized environments. Skilled in JavaScript, Python, and Node.js, I excel at crafting scalable applications that solve real-world challenges. Passionate about collaborating in fast-paced teams to push the boundaries of technology and deliver impactful software.

## Education

### J S S Academy of Technical Education Bengaluru

B.E. in Information Science and Engineering

Nov. 2022 – June 2026

Bengaluru, Karnataka

**CGPA: 8.6**

### Relevant Coursework

- Data Structures
- Algorithms Analysis
- Operating Systems
- Database Management
- Object-Oriented Programming
- Computer Architecture

## Projects

### AI-Augmented Kernel for Resource Optimization — Python, cgroups, Machine Learning

Aug. 2024 – Oct. 2024

- Engineered an AI model using Random Forest to predict CPU usage, boosting resource efficiency.
- Integrated `psutil` for real-time metrics and `cgroups` for dynamic resource control.
- Validated performance improvements through stress testing, enhancing CPU stability.

### Full-Stack Web Application — Node.js, Express.js, MongoDB, EJS

May 2024

- Developed a responsive full-stack app with Mapbox API for geolocation and Passport.js for security.
- Utilized MVC architecture for maintainability and MongoDB for efficient data handling.
- Delivered a seamless user experience with server-side rendering via EJS.

### CRUD Application — Express.js, EJS, JavaScript

April 2024

- Built a modular CRUD app with UUID for unique IDs and middleware for streamlined operations.
- Ensured data persistence and scalability with a clean, maintainable codebase.

## Technical Skills

- **Languages:** JavaScript, Python, SQL, Java, C, HTML, CSS
- **Frameworks:** Node.js, Express.js, EJS, Passport.js
- **Tools:** Git, GitHub, VS Code, Mapbox, Cloudinary
- **Concepts:** Machine Learning, MVC, System Optimization

## Leadership & Extracurricular

### IEEE Member

2024 – Present

- Led technical workshops, enhancing collaboration and communication skills.
- Contributed to AI and ML projects, promoting innovation within the community.