KARUNAKAR REDDY KALLA

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# EDUCATION

**Master of Science in Computer Science**, George Mason University, Fairfax Aug 2022 - May 2024 Coursework: Data Structures and Algorithms, Database Systems, Software Testing, Programming Tools, Software Engineering for WWW, Software Architecture.

**Bachelor of Computer Science**, Vellore Institute of Technology, Amaravathi, India June 2018 – Apr 2022

# SKILLS

**Programming & Frameworks:** Python, JavaScript, Java, HTML, CSS, SQL, Spring Boot, Angular, React, Node.js,

Hibernate, Spring MVC, JPA.

**Databases, Cloud & Tools**: MongoDB, MySQL, Amazon AWS, Jenkins, Git, GitHub, Maven, VS Code, Eclipse.

**Testing & APIs**: Junit, Mockito, Postman, RESTful APIs.

# EXPERIENCE

**Web Developer** June 2024 – Present

**Hoosier Community Network, USA**

* Led the development of scalable web applications using the MERN stack, optimizing system architecture and handling over 50,000 daily user requests.
* Engineered reusable React components and robust Node.js APIs, reducing front-end development time by 30% and improving system reliability.
* Collaborated with cross-functional teams to streamline workflows, resulting in a 25% boost in team productivity and project delivery.

**Software Developer Intern** Jan 2022 - May 2022

**Shiash Info Solutions, Chennai - India**

* Enhanced backend services in Java and Spring Boot, improving data retrieval efficiency by 20% and enabling the system to process 10,000+ daily requests
* Structured MySQL database schemas and executed RESTful APIs, reducing latency and elevating user experience.
* Led Agile processes, achieving a 99% defect resolution rate and ensuring high-quality project delivery.

**Front-end Developer Intern** Aug 2021 - Dec 2021

**Smile Foundation, Hyderabad - India**

* Developed and refined front-end components with React and Angular, resulting in a 25% improvement in page load times and handling capacity for over 15,000 daily users.
* Designed responsive UI layouts and effectively integrated RESTful APIs, which reduced latency and significantly boosted user experience.
* Engaged in Agile processes, achieving a 98% defect resolution rate and ensuring the delivery of high-quality projects.

# PROJECTS

**Student Survey Management Portal (MERN Stack, HTML, CSS, AWS)**

* Developed a robust backend API using Node.js and Express.js, integrated MongoDB for efficient data management, and implemented secure JWT-based authentication, these efforts reduced feedback submission time by 40%
* Deployed the application on AWS with Docker and Kubernetes, creating a scalable and resilient infrastructure that ensures high availability and seamless performance under heavy user load.

**Wellness Tracking System (ReactJS, NodeJS, JS, HTML, CSS, MongoDB, Amazon AWS)**

* Engineered a comprehensive fitness web application using ReactJS, NodeJS, and MongoDB, incorporating features such as real-time chat, subscription services, and dynamic posts, which significantly enhanced user engagement.
* Deployed the platform on Amazon AWS, leveraging cloud services to support multiple user types and maintain high availability and performance across varying usage patterns.

**Multi Agent LLM Validation (GitHub Copilot, OpenAI GPT-4, OpenAI GPT 3.5, Google Bard)**

* Designed and implemented a multi-agent LLM validation workflow, integrating OpenAI GPT-4, GPT-3.5, Google Bard, and Cohere to streamline code review processes, reducing review time by 30% and minimizing context switching for developers.
* Automated variable naming and code quality improvements, leading to a 25% reduction in manual effort, while significantly improving overall development efficiency and consistency across projects.