Sai Harshitha Sivalingala

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SKILLS

Java | JavaScript | C++ | HTML | CSS | Sass | SQL | Python | TypeScript | NoSQL | PostgreSQL
React JS | Node JS | Redux | Express | MongoDB | Git | AWS | Docker | Firebase | Jenkins | Figma | Unity | CI/CD | Terraform
Front-end | Back-end | Full-stack | Micro Services | User Experience | Mixed Reality | OOPs | AI | ML | DevOps | Open-Source

EXPERIENCE

Research Assistant - *Iowa State University, United States*   **Aug 2024 — Apr 2025**
- Implemented continuous authentication mechanisms for Mixed Reality systems, enabling secure multi-user access on devices designed for single-user use.
- Enabled real-time transitions between users, maintaining an uninterrupted experience while ensuring secure identity verification.
- Improved device usability in public safety and healthcare sectors by allowing secure and accountable access to shared Mixed Reality devices, minimizing data leakage risks, and reducing downtime for authorized users.
- Research outcomes support the development of scalable identity frameworks for shared Extended Reality environments.

Software Engineering Internship - *EPAM Systems, Hyderabad, India*   **Jul 2022 — Feb 2023**
- Gained in-depth expertise in AWS, Docker, Jenkins, and cloud computing, building real-world, scalable solutions.
- Automated development workflows and CI/CD pipelines, reducing manual deployment errors and improving release speed by 40%.
- Applied understanding of the Software Development Lifecycle (SDLC) to implement DevOps practices that improved code quality, deployment speed, and team collaboration across each stage.
- Demonstrated the ability to translate DevOps concepts into practical solutions, contributing to operational efficiency and continuous delivery of high-quality software.

Full-Stack Developer (Intern) - *StudyOwl Education Pvt Ltd, Bengaluru, India*   **Jun 2021 — Aug 2021**
- Maintained a full-stack web application for a student learning platform using the MERN stack (MongoDB, Express.js, React, Node.js).
- Implemented role-based access and interactive dashboards, improving platform security and usability across diverse user groups.
- Collaborated with designers and educators to improve UI/UX, leading to a 20% increase in student engagement.
- Mentored 10+ students in the MERN stack, providing hands-on guidance with coding, debugging, and building robust applications.

EDUCATION

Master of Computer Science - *Iowa State University, United States,* **GPA : 3.74**   **Jan 2024 — Dec 2025**
Bachelor of Information Technology - *JNTU Hyderabad, India,* **First class with Distinction**   **Jul 2019 — Aug 2023**

PROJECTS

Test Automation Agent | Python, Pytest, AI, Git   **May 2025 — Present**
- Building an AI-powered test generation system that achieves 80% code coverage with minimal manual intervention by automating the creation, execution, and improvement of test cases.
- Designing a self-healing pipeline that auto-detects test failures and leverages intelligent agents to iteratively enhance test quality.
- Reduced developer effort by 50% and streamlining testing processes across multiple modules.

ChargeShare: Peer-to-Peer EV Charging Network | React.js, Node.js, PostgreSQL, Git, AI   **Dec 2024 — Apr 2025**
- Implementing a platform that connects EV owners with available charging stations through location-based discovery.
- The system incorporates a dynamic booking mechanism, secure payment processing, and user feedback features.
- Exploring AI-powered demand prediction and adaptive pricing models to optimize station availability and cost efficiency.

Real-Time Exercise Monitoring Application | MediaPipe BlazePose, TensorFlow, OpenCV-Python, Conda, ML   **Feb 2024 — May 2024**
- A real-time exercise recognition and repetition counting system using BlazePose and MediaPipe, enhanced with LSTM and bidirectional LSTM with attention mechanisms for improved accuracy.
- Evaluated on a dataset of six common exercises, achieving competitive performance for fitness monitoring.

School Shop | MERN Stack, Redux, JavaScript   **Nov 2022 — Jan 2023**
- Developed a full-stack e-commerce platform enabling students from the same institute to buy and sell books, electronics, and stationery, with distinct user and admin views, product management, and a complete cart and purchase system.
- Created a responsive UI using React to provide an intuitive and user-friendly experience across devices.

ACHIEVEMENTS

Top 5 Finalist at Ivy Hackathon@Iowa State University (Technical Track): Developed a solution to protect elderly individuals from various scams, leveraging real-time threat detection and intuitive user interfaces to enhance digital safety and awareness.

Scholar at Women In Software Engineering (WISE): Led the top-ranked project, 'Human Pose Estimation for Fitness Application,' in the TalentSprint WISE program, managing a team of 4 and demonstrating technical expertise and leadership.

Google's 30 Days of Cloud Challenge: Completed Google's 30 Days Cloud Challenge Engineering Track, gaining hands-on experience with advanced cloud technologies and expertise in scalable infrastructure management and deployment strategies.