Veeramalli Sathwik

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Education

Indian Institute of Technology, Hyderabad   **2019 - 2023**
B.Tech in Computer Science & Engineering   *8.17/10 CGPA*

Professional Experience

Bosch Global Software Technologies   **Aug 2023 – Present**
Senior Software Engineer   *Full Time*

- Led frontend development for a multi-brand automotive e-commerce platform (**Ford, Jaguar, Isuzu, Toyota, Subaru**) using **React**, **TypeScript**, and **Redux**. Implemented high-performance filter-based search for large datasets.
- Adopted **Behavior Driven Development (BDD)** practices—created Gherkin-based feature files with Product Owners and QA, ensuring clarity in requirements and reducing post-release defects by 35%.
- Developed and maintained admin panels with **React-Admin**, improving data workflows and cutting administrative effort by 30%.
- Created comprehensive **unit and E2E test suites** using **Jest** and **React Testing Library** to ensure performance and reliability.
- Enhanced **SEO** for React apps by adding dynamic meta tags with **Express.js** and generating category-based sitemaps, publishing prioritized sitemap.xml files with top product URLs to improve indexing and search ranking.
- Led vulnerability management for the project, systematically reducing security issues from **2,667 (including 41 critical and 225 high) to 1,724 (with zero critical or high vulnerabilities)** by remediating code and dependency risks, improving overall platform security and maintainability.
- Conducted sessions for large forums on the advantages of using GitHub Copilot, demonstrating its impact on developer productivity and best practices for AI-assisted coding.
- Mentored interns on frontend best practices in the **Way Finder project** (campus navigation platform) and guided them on interactive map features.
- Contributed to AI-driven initiatives, including a **virtual assistant prototype** and **AI POCs** that enhanced frontend experiences.

Academic Projects

Department Fund Management System.   [Source Code](#)

- Developed a full-stack web application for efficient departmental fund management, streamlining the approval workflow for funding requests. Implemented user role-based permissions and automated notifications to enhance accountability. **Tech Stack**: React.js, Django REST Framework, PostgreSQL, HTML5, CSS3.

Offloading Authentication Functionality To Programmable Data Plane Project.   [Source Code](#)

- Accelerated PUF-based UAV Authentication Protocols using Programmable Switch architecture. Engineered high-performance traffic management between network devices using P4 language, implementing data plane-level firewalling to eliminate unauthorized traffic. Optimized routing tables and critical authentication actions, resulting in significant latency reduction for UAV communication security.

Deep Learning & IoT Integration for Assistive Technology.

- Designed and built an assistive technology system for visually impaired users leveraging deep learning and IoT. Engineered a Raspberry Pi-based solution with camera integration and physical trigger mechanism. Implemented YOLOv5 object detection with 64 classes for real-time environmental awareness, providing audio feedback through a breadboard-connected interface for enhanced accessibility.

Relevant Coursework

- Data Structures
- Artificial Intelligence
- Operating Systems
- Computer Architecture
- Machine Learning

Technical Skills

Languages: C, C++, Python, Solid Edge, SQL, P4, LaTeX, MIPS, Lisp, TypeScript, JavaScript
Frameworks: React, React Admin, SassCSS, HTML, CSS, Material UI
Developer Tools: Postman, VS Code, GitHub Copilot, Linux

Leadership & Achievements

- Served as **Senate Member** and **Class Representative**, resolving academic issues, improving credit systems, and ensuring smooth student–faculty coordination at IITH.
- Acted as **Placement Coordinator**, facilitating company engagement and improving placement outcomes.
- **Awards & Ranks:** AIR 834 (JEE Advanced), AIR 915 (JEE Mains), TS Rank 42 & AP Rank 148 (EAMCET), **Champ Skill**, **Kudos**, and **Inspirer Awards** for excellence in React, .NET, and Generative AI adoption.