SAI VARSHINI THUPAKULA

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EDUCATION

Vasavi College of Engineering, *B.E in Computer Science* | Hyderabad, India GPA: 9.1 / 10 May 2023

Coursework: Data Structures and Algorithms | Design and Analysis of Algorithms | Object-Oriented Programming - Java | Software Engineering | Computer Networking | Operating Systems | Computer Organization and Architecture

EXPERIENCE

IBM, *Software Engineer* | Hybrid (Pune, India) Aug 2023 - Present

- Backend developer for IBM's Data Resiliency - Spectrum Protect Plus, a key revenue-generating product, utilizing Java and Spring.
- Optimized API execution by implementing a caching mechanism, improving the SLA by 3.7%.
- Migrated the PostgreSQL database to MongoDB and deployed it to production successfully.
- Integrated and maintained BIRT reports, a data visualization tool, within the product to display comprehensive usage data and the services utilized by customers.
- Actively contributed to identifying, analyzing, and resolving product vulnerabilities, ensuring security and reliability.
- Responsible for directly interacting and working with prime customers and ensuring timely releases from our side.

IBM, *Software Engineer Intern* | On-site (Pune, India) Jan 2023 - Jul 2023

- Developed a comprehensive machine management tool using React.js for the frontend, Node.js/MySQL for the backend, Docker for containerization and deployment, and configured the application to run on a virtual machine.
- Integrated Python scripts to retrieve detailed VM information, enhancing project efficiency by over 30%.
- Received high appreciation from SMEs, STSM, Program Directors, and leaders, leading to customization requests from various teams.

SKILLS

Domain skills	Java development, BIRT, Databases
Languages and Frameworks	Java, Spring Boot, Python, C/C++, JavaScript, Node.js, React.js, MongoDB, MySQL
Tools	VSCode, GitHub, BIRT, Eclipse, Tableau, Docker

RESEARCH PAPER

Automated Glaucoma Detection PUBLISHED PAPER

Developed an innovative diagnostic tool for early glaucoma detection, achieving 94% accuracy by harnessing CNN, SVM, and KNN, trained on the RIGA dataset of 2,664 retinal fundus images, aiming to mitigate vision impairment.

UNDERGRADUATE PROJECTS

Track-It (Source)

- Developed a full-stack web application using HTML, CSS, and ReactJS for the frontend, along with NodeJS, ExpressJS, and MongoDB for the backend, designed to streamline job application tracking.
- Implemented features to facilitate the management of job entries categorized as Pending, Interview, and Declined, enhancing organizational efficiency in tracking applications.
- Provided a seamless interface for job application management, improving efficiency and organization.

Covid Safe Room (Source)

- Developed an IoT project using C language and Arduino UNO, integrating PIR sensors, a body temperature sensor, and an LCD display to create an automatic door opening system, for safety during the COVID-19 pandemic.
- Implemented room occupancy monitoring and body temperature tracking capabilities, enabling real-time tracking and control of the number of individuals in a room, configurable for up to 50 people.
- Observed the potential for significant reduction in virus transmission by up to 25% across various institutions.

Spectrum (Source)

- Developed a web application using ReactJS, Bootstrap, and JavaScript designed for managing color palettes.
- Enabled users to copy shades from nine palettes in hex, RGB, or RGBA formats with just one click and create/delete custom palettes to enhance flexibility and user customization.

ACHIEVEMENTS

- Earned IBM Digital Credential Badges for IBM WatsonX Essentials and AIX Systems Administrator.
- Achieved perfect scores in TechGig Geek Goddess (200/200) and placed highly in the SQL challenge (90/100).
- Ranked 12th in CodeKaze 2022 at the college level and achieved over 80% in the International Mathematics Olympiad.