Vamshi Krishna Navulla

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Education

University at Buffalo — Buffalo, NY
Master of Science in Computer Science — *Aug. 2022 – Dec. 2023*

Sreenidhi Institute of Science and Technology — Hyderabad, India
Bachelor of Technology in Electrical, Electronics and Communications Engineering — *June. 2015 – May. 2019*

Technical Skills

Languages: Java, Python, C, C++, SQL (Postgres), MySQL, NoSQL, JavaScript, HTML, CSS, C#
Frameworks: React, Node, Flask, LangChain, Material-UI, Agile
Developer Tools: TypeScript, Git, Github Actions, Docker,VS Code, Visual Studio, Eclipse, Linux, Excel, Airflow, Jenkins, Kubernetes, ssh, Hadoop, MapReduce
Libraries: Pandas, NumPy, Matplotlib, PyTorch, Keras, Tensorflow, Scikit, OpenCV
Soft SKills: Detail Oriented, Troubleshooting, Persistence

Experience

Software Engineer — June 2019 – December 2021
Cognizant Technology Solutions — *Chennai, India*

- Developed e-commerce functionalities for a luxury retailing client using React, Nodejs, PostgreSQL and Docker, resulting in streamlined referral and commission processes. Reduced debugging time by 50%.
- Utilized React, React-Redux, and Redux-Saga for efficient state management, achieving a 25% performance optimization. Collaborated within agile methodologies, ensuring timely project completion.
- Implemented RabbitMQ integration between Java and PHP applications, enhancing throughput by leveraging queue splitting techniques.
- Assisted in seamless integration of Drools, achieving a remarkable 99% alignment between application and business logic.
- Mentored and guided over 10 teammates in adhering to modern industrial standards in application development.
- Expanded skill set by studying advanced Kubernetes concepts.
- Migrated existing monolithic application into Cloud environment using Amazon Web Services.
- Developed Micro-Services based architecture to enable the application to be deployed on AWS.
- Responsible for creating an instance on Amazon EC2 (AWS) and deployed the application on it.
- Worked on AWS services to deploy static websites and dynamic Web Apps on EC2 using Elastic Beanstalk and Elastic Container Service-Docker.
- Efficiently utilized Jenkins, Docker, and GitHub to streamline application deployment on AWS
- Developed Java API to interact with the Amazon SQS used in sending bulk emails.
- Deployed Spring Boot based Micro Services Docker container using Amazon EC2 container services and using AWS admin console.
- Used Docker to containerize the Services and APIs to run on EC2 instances.
- Implemented build stage-to build the Micro Service and push the Docker Container image to the private Docker registry.
- Used Maven as a build automation tool and responsible for Continuous Integration (CI) and Continuous Delivery (CD) process implementation using Jenkins.
- Used GitHub as a Version Control tool, Jira for issue tracking, and IntelliJ as the IDE.
- Interacted with Product Managers to fine-tune user stories and with the testing team to approve Functional Specification and test cases.
- Involved in Daily SCRUM calls and weekly SPRINT Meetings.
- Involved extensively in Code Reviews, Unit testing, and Process Improvements.
- Worked on issue tracking tool JIRA.

Software Engineering Intern — January 2019 – May 2019
Cognizant Technology Solutions — *Hyderabad, India*

- Developed full stack application using Spring Boot architecture. Crafted microservices for RESTful API communication, reducing payload by 2x.

- Developed frontend using Bootstrap and React, backend with Spring Boot 2.1+, Java 8, while ensuring security with Spring Security, SSL, Form, HTTPS, and JWT.
- Managed data using JPA-Hibernate, MySQL, Oracle, MongoDB, and PostgreSQL.
- Developed RESTful Web Services with JAX-RS using Spring Boot and a Micro Services Architecture.
- All functionalities were implemented using Spring Boot and Hibernate ORM.
- Designed and developed RESTful web services supporting JSON for accelerated development using Spring Boot.
- Developed RESTful endpoints for caching application-specific data in in-memory data clusters and exposed them with RESTful endpoints.
- Implemented authentication and authorization of the application using Oauth.
- Worked on Spring Restful template to develop Application-Level Micro services.
- Completed unit testing of all Java classes using JUnit framework.
- Used Log4j for logging all the debugging and error information.
- Used Spring JPA Framework to use the features of Spring JDBC and Spring ORM classes like JDBC Template and Hibernate Template to perform the database operations by connecting to Data sources available.
- Performed CRUD operations like Update, Insert, and Delete data in Mongo DB.
- Worked on Mongo DB database concepts such as loc king, transactions, indexes, Sharding, replication, and schema design, etc.
- Written SQL, stored procedures for SQL Workbench.

Projects

BeInSync - Mutual Mentorship Platform | *React, JavaScript, Material UI, Firebase Authentication*

- Addressed the challenge of scarce and expensive professional mentoring by creating BeInSync, a mutual mentorship platform at the Hack your Innovation Hackathon.
- Empowered students to both mentor and seek mentorship, fostering a collaborative learning environment and making professional development accessible to thousands.

Chrome Extension - Web Summarization & Audio Conversion | *Chrome Extension APIs, OpenAI API, TTS API, React*

- Currently developing a Google Chrome extension, powered by React and a versatile technology stack, to provide web page summarization and audio conversion capabilities. The primary goal is to cater to visually impaired users, making web content more accessible.
- Utilizing Chrome Extension APIs for browser interactions, the OpenAI API for web content summarization, and a Text-to-Speech (TTS) API for audio conversion.
- This project strives to improve web accessibility for visually impaired individuals by summarizing web content and offering it in an audio format, all within the Chrome browser.

Secure Triplet Loss for Iris Biometrics Using Deep Learning | *Vision Transformer, Template Security, Docker*

- Enhanced Iris template cancelability through transfer learning with a Secure Triplet loss function, bolstering precision and power. Achieved better EER by 15% using Vit Transformer.
- Outperformed published author's neural network based model by achieving a 20% higher cancelability score, challenging the Inception Resnet model.

Pintos Operating System | *Multi-threading, Virtual Memory*

- Designed and implemented system-level functionalities, including multi-threading, file systems, memory management, and virtual memory, using C.
- Implemented advanced synchronization mechanisms to ensure efficient thread scheduling and prevent deadlock situations.

Employee Incident Management System | *Bootstrap, Spring Boot, Spring Security*

- Lead a team of 5 in engineering a full stack application to manage, direct and solve incidents escalated by employees across an organization.
- Serviced API authorization with OAuth 2.0 API and 'react-cookie' to read CSRF cookie.
- Conducted thorough API testing with POSTMAN to ensure reliable functionality.