SAI KRISHNA ANUGU

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Education

Master of Science in Computer Science **Aug 2022 - April 2024**
University of Florida **GPA: 3.72/4**
Coursework: Analysis of Algorithms, Distributed Operating systems, Machine learning, Computer networks, Advance Data Structures, Human computer Interaction, Mathematics for Intelligent Systems, Data Eng.

Technical Skills

Languages: C, C++, Java, J2EE, R, Python, JavaScript, HTML, CSS, C#, TypeScript, Go, MATLAB.
Frameworks & Libraries: ReactJS, Angular JS, React Native, NodeJS, Django, Flask, NumPy, Pandas, Pytorch, TensorFlow, Keras, scikit-learn, JSON, .Net, Spring, Kafka, Jenkins, Maven, JUnit, Jest, JMS, Hibernate, XML
Tools: DynamoDB, MySQL, NoSQL, SQL, Git, IntelliJ, Jupiter, AWS, Kubernetes, docker, Linux, GitHub, SAP, Kernel, GraphQL, SaaS
Other Skills: DSA, Database Management, Web Development, UI, Machine Learning, REST API, Azure, SOAP, SDLC, Continuous Integration, Continuous Development & Continuous Deployment, TCP,TLS, Salesforce, Operating Systems, Statistics, Oracle.

Experience

Research Assistant – Software Engineer **Jan 2023 to Present**
University of Florida – College of Design & Construction Planning- Dean's Office
- Contributed to research and development in anomaly detection for HVAC systems. Created the main dashboard interface using ReactJS, displaying key metrics and visualizations of HVAC system data. Developed backend services in Python and C++ to process raw sensor data collected from systems, applying algorithms for anomaly detection and fault analysis.
- Designed and created the database structure and its tables to minimize the storage of data. Optimized database queries to ensure immediate data retrieval and analysis.
- Developed ETL processes using Pentaho and had worked on Hadoop for enhancing data integration. Supported the creation of Predictive Fault Analysis models using variational auto encoder machine learning model.
- Applied Machine Learning optimization techniques , adjusted loss functions, tuned hyperparameters to improve system reliability and safety.

Software Engineer **Jul 2021 to Aug 2022**
Cognizant Technology Solutions
- Participated in Agile/Scrum methodologies, engaging in sprint planning and execution with JIRA to align projects with strategic goals and timelines.
- Developed UI modules using Angular9, Node JS, React JS, Bootstrap, JavaScript, Ajax, jQuery, CSS3, and HTML5, focusing on creating responsive web pages for enhanced user experience.
- Utilized Java, Spring, Hibernate, JDBC, and Spring frameworks (Spring AOP, Spring Batch, Spring Boot, Spring Cloud) for back-end development. Implemented SOAP and REST web services, ensuring efficient communication between components.
- Designed and developed detail pages using Java, JSP, Struts, and EJB. Developed microservices deployed in AWS and Azure for scalability and flexibility.
- Managed SQL, MySQL, MongoDB, PostgreSQL databases and integrated messaging brokers (RabbitMQ, Kafka) to facilitate efficient data management and microservices communication. Integrated front-end and back-end systems to ensure seamless communication.
- Performed unit testing using JUnit, Mockito, Postman. Deployed applications using Docker, Kubernetes, Pivotal Cloud Foundry.
- Deployed applications on BEA Web Logic, Apache Tomcat, WebSphere, and JBoss. Supported CI/CD processes through Jenkins, Git, and SVN to streamline the build and deployment processes, improving team productivity and code quality.

Software Engineer Intern **Jan 2021 to Jun 2021**
Cognizant Technology Solutions
- Designed front-end using HTML, CSS, JSP, Servlets, JSTL, Ajax, and Struts. Implemented JavaScript for validation.
- Developed Training and Appraisal modules in Java, JSP, Servlets, and JavaScript. Created UI with Java Servlets, JavaScript, HTML, CSS3, and Ajax. Built Action classes for JSP requests. Developed Java Beans for DB communication.
- Demonstrated expertise in troubleshooting and debugging, systematically identifying, and resolving issues in existing applications, ensuring seamless functionality.

Projects Experience

Implementation of GAN and VAE on MNIST Datasets and Face Images
- Successfully developed and executed Generative Adversarial Networks (GANs) and Variational Autoencoders (VAEs) using python to generate synthetic images using both the MNIST dataset and real face images.
- Conducted an in-depth analysis of loss functions, adjusting coefficients and fine-tuning model hyperparameters for GAN and VAE architectures. This optimization process led to enhanced image generation quality and more stable training dynamics.

Distributed Twitter Engine using AKKA Framework and Web Sockets in Erlang
- Leveraged the AKKA Actor Model to design and develop a robust Twitter Engine, enabling users to engage in essential activities such as tweeting, user authentication, registration, following other users, and retrieving tweets based on hashtags, resulting in an increase in user engagement. Ensured high reliability in handling data processing & user interactions.
- Integrated Web Sockets into front-end & back-end, enabling live notifications and updates for users whenever they are mentioned or when new tweets are posted by followed users.