Adithya Merugu

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Summary

Results driven Computer Science Master's student with 3+ years of professional experience in building scalable **Microservices** and **RESTful APIs** using Java, Spring Boot, and cloud native technologies. Proficient in leveraging Docker, Kubernetes (AKS), and Azure DevOps for deploying applications. Proficient in backend development with expertise in **SQL**, including database design, query optimization, caching strategies, and performance tuning.

Education

UNIVERSITY OF KANSAS (KU) — Lawrence,Kansas
Masters in Computer Science - Course work in machine learning and AI — *May 2025*

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY — Hyderabad, India
Bachelor of Technology in Computer Science — *September 2020*

Skills

- **Programming Languages**: Java, Python, SQL, JavaScript, ReactJS ,Linux, NodeJS, Data Structures, Xml, JSON
- **Frameworks**: Spring MVC, RESTful APIs, Spring Boot(Batch, AOP, Security, JPA), pyspark, Prometheus
- **Cloud Technologies**: AWS S3, Lambda, API Gateway, Microsoft Azure(Azure Kubernetes,Redis), Docker
- **Databases**: MySQL, Oracle SQL
- **Tools**: Eclipse, IntelliJ, SQL Developer, Maven, Git, Jira, Tortoise SVN, Power BI, VScode, JMeter ,Prometheus, Jenkins
- **Methodologies**: Agile (Scrum), Test Driven Development (TDD), CI/CD, DevOps practices

Relevant Experience

VALUEMOMENTUM SOFTWARE SERVICES — Hyderabad, India
Software Engineer — *December 2020 – July 2023*

- Developed and maintained high performance web applications using Java and Spring Boot, addressing real-time business requirements
- Designed microservice components with Spring Security, Spring Batch, and Spring Data JPA, resulting in a 25% increase in modularity and a 20% improvement in runtime efficiency.
- Reduced API response times by 40% by implementing efficient caching mechanisms and SQL query optimization and tested RESTful APIs using Postman and automated validation of responses using JUnit and Selenium .
- Optimized database queries in Oracle and MySQL, reducing execution times by 20%, while designing scalable database schemas and updating SQL scripts to align with application architecture and evolving requirements.
- Led the design, development, and unit testing process using Swagger and Postman, ensuring the delivery of high-quality software applications.
- Leveraged Docker for containerization and orchestrated deployments using Kubernetes, with images managed through Azure Container Registry (ACR), ensuring consistent and reliable application scalability across environments.
- Utilized Jenkins for continuous integration and deployment, automating build and testing pipelines with Maven, Gradle
- Orchestrated the implementation of 30+ change requests, enhancing system functionality; resolved 95% of production issues within SLA using Azure Boards and Jira.

ELECTRONIC CORPORATION OF INDIA — Hyderabad, India
Software Intern — *March 2019 – May 2019*

- Improved client financial transaction management by consolidating multiple transactions onto a unified page, enhancing user satisfaction and operational efficiency.
- Contributed to the seamless operation of the application by developing frontend pages and designing the database using Angular , Java, and MySQL .

Projects

Counterfeit IC Detection System | *TensorFlow, MobileNetV2, Image Processing* — Fall 2023

- Leveraged transfer learning with MobileNetV2, fine-tuning for binary classification of authentic vs counterfeit ICs.
- Implemented data preprocessing, image resizing to 224x224 pixels, normalization, and regularization to mitigate overfitting
- Achieved a testing accuracy of 94.1%, with training accuracy at 96.0%, and developed a program to evaluate confusion matrix, classification accuracy, and other metrics.

AI Generated Images Detector | *TensorFlow, Numpy, Matplotlib, Scikit-Learn* — Spring 2024

- Performed data augmentation, resizing images to 32x32 pixels, and normalization for enhanced model training.
- Customized pre-trained ResNet50 base for binary classification task, incorporating additional layers for feature processing.
- Trained model for 10 epochs, employing early stopping for optimal performance, evaluated with unseen images, achieving Precision: 94.9%, Recall: 89.2%, and Accuracy: 92.2%.

Certifications

- AWS Certified Developer Associate
- Career Essentials in Generative AI by Microsoft