MONITHA DAVULURI

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PROFESSIONAL SUMMARY

Results-driven Master's in Computer Science Graduate with a strong foundation in software engineering principles, a passion for building innovative solutions, and the ability to thrive in dynamic environments.

EDUCATION

California State University, Northridge, MS in Computer Science, GPA: 3.91/4.0 (Honors) CA, USA
Coursework: Advanced Data Structures and Algorithms, Adv Web Engineering, Software Engineering, AI

JNTUH, BS in Information Technology, GPA: 3.71/4.0 Telangana, IN
Coursework: Algorithm Design, Operating Systems, Database Management System, Cloud Computing

EXPERIENCE

Software Engineer, J.P. Morgan Chase & Co. Aug 2022 – Aug 2023

- Designed **modular**, **cross-functional APIs** using **SpringBoot** for seamless integration across 17 downstream applications, by leveraging **software development principles**
- Worked on developing core functionality in **Java** of a credit-risk application used by 2500+ clients and enhancing performance efficiency by 70%
- Spearheaded **Technical Data Quality** (TDQ) implementation, ensuring **data integrity**, **validation**, and **consistency**
- Migrated a **microservice** codebase from **Ext.js** to **React**, enhancing application performance by 40% and reducing load times by an average of 2.5 seconds
- Significantly reduced deployment time by proactively fine-tuning **Kubernetes** resource limits and auto-scaling policies

Software Engineer Intern, J.P. Morgan Chase & Co. Feb 2022 – July 2022

- Integrated 20+ credit risk applications into a data quality framework with over 90% coverage via **REST APIs**
- Built 8+ interactive **React UI** components for a real-time dashboard, streamlining user interactions
- Provided detailed analysis of production incidents by analyzing **Splunk** and **Kubernetes** pod logs during production incidents

TECHNICAL SKILLS

Programming Languages & Frameworks: Java, Python, JavaScript, React, Node.js, Spring Boot, SQL

Relevant Skills: Kubernetes, Selenium, Junit, Cucumber, Object-oriented, REST APIs, Docker, SDLC, MySQL, Agile, Splunk, DevOps (Jira, Git, Bitbucket, Jenkins, Postman, CI/CD)

PROJECTS

Autoencoder-based Feature Selection with Optimized Reconstruction Loss and Feature Scoring GitHub Link

- Built autoencoder-based feature selection algorithms AERL and AERL-FS that beats 11 out of 13 state-of-the-art feature selection techniques, using Python, Tensorflow and scikit-learn.
- Reduced feature set size by 75% while maintaining higher classification accuracy and lower error rate.

Music Memory Archive - Music Management System GitHub Link

- Designed an interactive music streaming website using React and Node.js enabling dynamic song management system.
- Improving RESTful APIs using MVC architecture to ensure modularity, optimized database queries with MSSQL, reducing the response time by 15%.

Transformers for Knowledge Tracing: Analyzing the EdNet Dataset GitHub Link

- Developed a transformer model leveraging LLMs for knowledge tracing using the EdNet dataset (131 million rows), improving student performance prediction accuracy by 24%
- Utilized PyTorch to implement the neural network layers and MySQL for efficient retrieval of student queries

PUBLICATIONS

Davuluri, M. (2025). "3GA-SFS: A Two-Stage Hybrid Algorithm for Feature Selection in Biomedical Data". *IEEE CCWC*.
(Pending) Davuluri, M. (2025). "Autoencoder based Feature Selection with Optimized Reconstruction Loss and Feature Scoring". *IEEE COINS*.