Aashish Reddy

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Technical Skills

Programming Languages: Python, SQL, Java, Javascript, Typescript, C++
Web Development: HTML, CSS, React, Tailwind, Node.js, Vite
Databases: MySQL, PostgreSQL, MongoDB
DevOps & Cloud : Git, Docker, Kubernetes, Restful API, Azure, AWS
Tools & Frameworks: Azure Data Factory, Apache Spark, Apache Airflow, PyTorch, Databricks, Jira

Work Experience

George Mason University, Fairfax, Virginia   Jan 2023 - May 2024
Graduate Teaching Assistant

- Instructed 70+ students in AIT526 - Introduction to NLP, facilitating hands-on learning of algorithm implementations, NLP models, and overseeing project evaluations.
- Led bi-weekly lab sessions focused on Python for NLP, conducting code reviews, addressing student queries, and collaborating with the professor to enhance and update course materials.

Cognizant Technology Solutions, India   Feb 2021 - Jul 2022
Software Development Engineer I

- Optimized data pipelines using Python and SQL, improving performance across MySQL and Redshift through efficient query optimization and connection pooling, reducing processing time by 10%.
- Automated data validation and error-handling processes using Python and custom scripts, improving data pipeline reliability and reducing manual intervention.
- Developed REST API integration scripts with error handling and retry mechanisms, increasing data accuracy and availability for analytics.
- Improved system stability by reducing production errors and downtime through comprehensive unit tests, debugging, and production support using Pytest and Git.

Projects

Chess Analysis Tool

- Built a web-based chess analysis platform using React and TypeScript, integrating real-time Stockfish analysis, personalized move feedback via a fine-tuned LLM, and interactive visualizations.
- Created custom React hooks to manage game state and offload computational tasks to web workers, ensuring a responsive application.

Automated Job Matching System

- Built an automated system using open-source LLMs to precisely match job descriptions with resumes, improving recommendation accuracy.
- Designed and implemented an ETL pipeline to scrape and aggregate job listings from multiple boards, validating real-time updates and relevance in job matches.

Microservices-based Student Survey Application

- Launched a student survey application integrated with EC2 and managed data through Amazon RDS.
- Engineered the backend using Spring Boot, integrated Amazon RDS for efficient database management, and established a robust CI/CD pipeline with Jenkins, resulting in over 99% system uptime and a 75% reduction in deployment time.

Formula 1 Racing Data Analytics Pipeline

- Designed and deployed a data engineering solution for real-time analysis of Formula 1 racing data, leveraging Azure Databricks for distributed data processing.
- Structured a Lakehouse solution using Delta Lake to enable version control, time travel, and incremental data ingestion for historical and real-time insights.

Education

George Mason University, Fairfax, Virginia, USA   Aug 2022 - May 2024
Master of Science in Computer Science

- **Relevant coursework**: Analysis of Algorithms, Component-Based Software Development, Database Systems, Advanced Machine Learning, Data Mining, Operating Systems.

Institute of Aeronautical Engineering, Hyderabad, India   Aug 2017 - May 2021
Bachelor of Technology in Information Technology