Srivardhan Vura

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EDUCATION

North Carolina State University, Raleigh, NC | May 2025
Master of Science in Computer Science | **4.0/4.0**
Coursework: Design and Analysis Algorithms, Cloud Computing, Database Management Systems, Computer and Network Security, Software Engineering, Neural Networks and Deep Learning, Automated Learning and Data Analysis

Manipal Institute of Technology, Manipal, India | June 2022
Bachelor of Technology in Information Technology | **8.73/10**
Coursework: Operating Systems, Data Structures and Algorithms, Computer Networks, Cyber security, Object Oriented Programming, Big Data

WORK EXPERIENCE

Research Assistant | **NC State University** | Raleigh, NC | Feb 2024 – June 2024
- Developed and deployed a full-stack application using **Java Spring Boot** on AWS ECS. Managed APIs with OpenAPI/Swagger and AWS API Gateway utilized **AWS Aurora RDS** for scalable database solutions and implemented an automated CI/CD pipeline using **GitHub Actions** to optimize development, testing, and deployment workflows.
- Integrated **Application Performance Monitoring (APM)** with the APIs which helped pinpoint performance bottlenecks, leading to a **20% reduction in API latency**.

Data Engineer | Loyalty Juggernaut | Hyderabad, India | Aug 2022 - June 2023
- Designed and implemented a pipeline to **migrate over 300 million records** from **AWS DynamoDB to PostgreSQL** in under 2 hours using **Apache Airflow and PySpark**, significantly enhancing data migration efficiency and reliability.
- Addressed the inefficiency of static EMR cluster sizes by leading the initiative to deploy an **automated EMR cluster resizing feature**, resulting in substantial **cost reductions of up to 30%** on AWS EMR expenditures.
- Developed **ETL pipelines** around a data lake for seamless data transfer to external systems using **Flask** for APIs, Airflow for orchestration, and **AWS Batch** for running Python scripts, improving data integration and accessibility.
- Designed a **Query Executor framework** for cross-team usage, emphasizing **BI and AI applications** enabling controlled Redshift write operations with built-in incremental logic for efficient database writes.

Software Engineer Intern | Tejas Networks | Bangalore, India | Jan 2022 - June 2022
- Developed a **machine learning model** designed to significantly reduce false positives in network alarms triggered by discrepancies, enhancing the accuracy of anomaly detection and **minimizing unnecessary alerts by 35%**.
- Developed an OCR application to extract key information from legacy configuration files using semantic segmentation, bounding box detection, and Google's Tesseract, enhancing automation in network monitoring and troubleshooting.

PROJECTS

Secure Chat Application | Python, Django, ReactJS, Cryptography
- Developed a secure, end-to-end encrypted chat application for two-person communication using Django for the backend, ReactJS for the frontend and public key encryption for data confidentiality and integrity.

Load Balancer as a Service | C++, Docker, Boost.Asio
- Designed and implemented a load balancer in C++ that supports three different algorithms: Round Robin, Least Connections, and IP Hashing and integrated with multi-threading and asynchronous programming techniques to handle high concurrency.

Shipping Application | Java, XML, Google Maps, Firebase
- Built a courier shipping mobile application featuring Firebase for secure user authentication and Google Maps integration for precise nationwide delivery tracking.

CERTIFICATIONS & SKILLS

Certifications: AWS Certified Developer- Associate
Languages: Python, Java, SQL, C++
Web Technologies: HTML, CSS, JavaScript, NodeJS, ReactJS
Frameworks/Libraries: PySpark, Hadoop, **Apache Airflow**, Hibernate, Android, OpenCV
Databases & Developer Tools: Postgres, **MySQL**, Redshift, MongoDB, Firebase Database, **CI/CD**, **Docker**, GIT, Postman
Cloud Technologies: AWS, GCP