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, Computer Networks, 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, Distributed Systems, Cyber security, Object Oriented Programming, Internet of Things, Big Data

WORK EXPERIENCE

Intern | **Loyalty Juggernaut** | Frisco, TX — Oct 2024 – Present

- **Refactored existing Spark jobs** to utilize bucketing and broadcast joins, achieving a **35% decrease in data shuffling** and improving overall query performance in high-throughput analytics pipelines.
- **Developed a Query Executor framework** allowing the BI team to schedule, update, and monitor custom Redshift queries independently—streamlining data refresh cycles, reducing DevOps overhead, and accelerating data-driven insights.

Research Assistant | **NC State University** | Raleigh, NC — Feb 2024 – June 2024

- Built a scalable, real-time data ingestion pipeline using AWS Kinesis Streams for high-throughput event processing and AWS Lambda for inline transformations, enabling continuous, low-latency delivery of research metrics into Aurora RDS and ensuring immediate availability for downstream analytics.
- Optimized complex SQL queries, implemented efficient indexing strategies, and improved table partitioning, resulting in a 30% decrease in query response times for large-scale datasets.

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 ensuring 99.9% reliability using **Apache Airflow and PySpark**, significantly enhancing data migration efficiency and reliability.
- **Developed a robust data export framework** enabling scheduled and on-demand offloading of query results from RDS/Redshift to multiple external destinations (S3, SFTP, Azure Blob). Leveraged Airflow for orchestration, DynamoDB for export configuration management, and AWS Batch for scalable data processing—ensuring efficient, reliable data delivery across diverse client environments.
- 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.
- **Containerized ETL workflows** using Docker, ensuring consistent environments for development and testing, and reducing integration failures by **25%** through streamlined deployment across staging and production.

Software Engineer Intern | Tejas Networks | Bangalore, India — Jan 2022 - June 2022

- 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**.

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.

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