

# 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 and AWS **Lambda**, 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 utilizing **Apache Airflow** and **PySpark**, 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 configuration management, and AWS Batch for scalable data processing—ensuring efficient, reliable data delivery.
- 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 through **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

**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.

**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.

## CERTIFICATIONS & SKILLS

**Certifications:** AWS Certified Developer- Associate

**Languages:** Python, Java, SQL, C++

**Frameworks/Libraries:** PySpark, Hadoop, Apache Airflow,

**Databases & Developer Tools:** Postgres, MySQL, Redshift, MongoDB, Firebase Database, CI/CD, Docker, GIT, Postman

**Cloud Technologies:** AWS, GCP