

# Harsha Vardhan Reddy Kuncha

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## EDUCATION

### Master of Science in Computer Science

Arizona State University, Tempe, AZ

May 2025

GPA: 3.83

### Bachelor of Technology in computer and communication engineering

Manipal Institute of Technology, Manipal, India

Aug 2018 – Oct 2022

GPA: 3.62

## SKILLS

**Programming Languages:** Python, Java, SQL, C, C#, C++, HTML, CSS, Flask, Go, Java, JavaScript, Bash, XML, GraphQL.

**Tools, Frameworks, Databases:** Docker, TypeScript, JUnit, Spring Boot, React, Node JS, Express, REST, Amazon EC2, MongoDB, MySQL, SQL Alchemy, Postgres, Selenium, jQuery, Swagger, Git, Oracle(**Certified**), AWS (**Certified**), Spark.

**Concepts:** Object-oriented programming, Data Structures and algorithms, Software Architecture, Cloud Computing, Quality Assurance, Parallel Programming, Distributed Database design, Cloud Architecture, Networking, Distributed Systems.

## EXPERIENCE

### Associate Software Developer

Aug 2022 – Aug 2023

#### Oracle Construction and Global Business Unit

Hyderabad, India

- Developed and maintained a **SaaS** invoice dashboard feature within full-stack application, utilizing **Flask**, **Python**, **RESTful API micro services** to craft a dashboard interfacing with Postgres. This tool is tailored for project management, clients and fellow developers to locate the fraud transactions feeds and reduce the repetitive calls by 30 % which decreases the load.
- Engineered application backend functionalities using **object relational mapper SQL Alchemy** to facilitate streamlined access to data analysis and reports. Incorporated versioned APIs practice maintaining compatibility and serializing.
- Improved data lake architecture on **Amazon S3**, optimizing storage and retrieval of large-scale datasets using partitioning and Parquet format. and deployed **Spark Streaming applications** for real-time data processing, enabling instant insights.
- Architected a **CI/CD** workflow by integrating **Docker Compose**, resulting in a 30% decrease in deployment errors and expediting the software release cycle for a product used by over 5,000 customers, tailored insights by customer feedback.

### Software Developer Intern

Jan 2022 – Jul 2022

#### Oracle Construction and Global Business Unit

Hyderabad, India

- Revamped a **RESTful microservice** with **Spring Boot** and **Thymeleaf**, enabling clients to track, edit queries, and download reports and assessed backend services in **Java** to automate network management, including secure device connections (**SSH/Telnet**) and data extraction.
- Leveraged **Postman** for API testing, designed UI screens and navigational flows for an intuitive user experience, optimized **PostgreSQL** by removing unused tables, and documented training modules for new features.

### Software Development Intern

May 2021 – Jan 2022

#### Samsung R&D

Bangalore, India

- Conducted **research on 5G RAN** (Radio Access Network) small area networks, evaluating the efficiency of replacing 4G with 5G to improve performance and throughput, and employed the **ns-3 simulation** tool to observe and analyze network.

## ACADEMIC PROJECTS

### E-Library – A MERN application | Flask, Python, MongoDB, JavaScript, HTML, CSS

- Developed a digital library web application using **Flask** and **Express** with features for book exchange, record maintenance, and timestamp tracking and utilized **MongoDB** for database management.
- Implemented an automated email reminder system with **PHP** and **SMTP** to notify users 7 days before the deadline.
- Deployed the application on **Heroku** and tested functionality with **Python** and **JUnit** to ensure reliability.

### Automated Data Pipeline | AWS, Snowflake, S3, AWS Lambda, web sockets

- Created a data pipeline integrating **Snowflake**, **AWS EC2** instance, and a web app, using **S3** for intermediate storage, orchestrated the process through AWS Lambda for seamless execution, and introduced Web Sockets for bi-directional communication to provide timely server notifications.

### Worldwide Messaging – A Microservice | Server-sent Events, JWT, Distributed programming, Node.js, SAML

- Crafted a distributed messaging microservice with **Node.js** and **Server sent events (SSE)**, reducing latency by 30% and securing data using strong cipher **security assertion markup language (SAML)**.

### Data Preprocessing tool | Python, Flask.

- Reduced data pre-processing time by 90% for machine learning tasks using **Python** and the **Flask** web framework.
- Designed a user-friendly **GUI** for managing CSV files, enabling easy upload, analysis, processing, and visualization of data.
- Implemented sophisticated **data processing** methods to clean and enhance datasets, producing detailed **analytic reports**.