

# Gana Syam Reddy Mandepudi

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## EDUCATION

University at Buffalo, The State University of New York – Buffalo/USA

Aug 2023 – Dec 2024

Master of Science in Data Science

Cumulative GPA: 3.75/4

- **Coursework:** Data Models & Query Language, Python, Data Structures, Machine Learning, Data Mining, Probability Theory, Data Intensive Computing, Data Visualization (PowerBI, Tableau).

## SKILLS & TOOLS

**Programming Languages:** C, C++, C#, Java, Python, R, SQL, Linux, Shell Scripting.

**Database:** MySQL, PostgreSQL, NoSQL, MongoDB.

**Web Technologies:** JSON, HTML, CSS, JavaScript, TypeScript, Spring Boot, React.js, Node.js, REST API's.

**Cloud Technologies:** AWS (EC2, S3, Lambda, Cloudwatch, CloudFormation, VPC, WAF, CloudFront), Azure.

**Tools:** JIRA, Jenkins, Docker, Postman, Nagios, Apache Spark, Git, ServiceNow, Hadoop, Databricks, Power Bi, Tableau.

## WORK EXPERIENCE

**Tata Consultancy Services (TCS), India** – Software Development Engineer

Jul 2021 - Jul 2023

- Designed and deployed AWS Lambda functions integrated with DynamoDB and API Gateway to automate inventory updates across physical and online stores, reducing manual intervention and improving response times by 30%.
- Created RESTful APIs using AWS Lambda and Python to enable seamless communication between the frontend and backend systems, ensuring efficient order processing and customer data synchronization.
- Developed and integrated machine learning-powered recommendation algorithms into Myer's e-commerce platform, leveraging AWS SageMaker and Elasticsearch to improve product search accuracy and personalized customer suggestions.
- Implemented caching mechanisms with AWS ElastiCache (Redis) to reduce backend query times, improving page load speeds by 35% and enhancing the overall shopping experience.
- Designed backend architecture to handle traffic spikes during peak shopping events using AWS services like SQS for message queuing and DynamoDB Streams for real-time updates, ensuring 99.9% uptime.

**Pankuri & Co., India** – Software Development Engineer Intern

Jan 2021 - Jun 2021

- Designed and implemented REST APIs using Spring Boot and Node.js to support real-time interactive sessions and content delivery for the platform.
- Developed and improved user-facing components using React.js, TypeScript, and CSS, ensuring a responsive and engaging interface for live courses and community interactions.
- Optimized complex SQL queries in PostgreSQL to manage user data and course interactions, reducing query execution time by 40% and improving overall database performance for real-time applications.
- Set up CI/CD pipelines using Jenkins to automate the deployment of backend services, containerized applications using Docker for efficient testing and deployment, and reduced release times by 30%.

## PROJECTS

**Bank Customer Churn Prediction** – *Python, Data Cleaning, Sampling, Feature Engineering, Machine Learning*

- Developed a Bank Customer Churn Prediction system by building machine learning models (Logistic Regression, Random Forest, SVM) with 83.14% accuracy, preprocessing data using SMOTE for balance, and creating a web application for real-time churn risk assessments and actionable insights.

**Retail Data Management System** – *SQL, Database Normalization, Relational Models, PostgreSQL, Query Optimization*

- Designed and implemented a Retail Data Management System by transforming raw datasets into a normalized relational database in PostgreSQL, optimizing query performance by 50% through indexing and SQL tuning, and integrating visual analytics into a web application for real-time insights into sales, inventory, and customer data.

**Real-Time To-Do Web Application** – *React.js, Node.js, MongoDB, Azure (App Service, Functions, Cosmos DB)*

- Designed and implemented a real-time to-do application with a responsive React.js frontend and a scalable Node.js API backend, integrating MongoDB Atlas for data storage and leveraging Azure Functions and App Service for seamless deployment and serverless workflows.

## CERTIFICATIONS

- AWS Certified Cloud Practitioner
- Microsoft Certified AI Fundamentals