**ROHITH PANJALA**

**Fairfax, VA | +1 (571) 455-0855 |** [rohithpanjala12@gmail.com **|**](mailto:rohithpanjala12@gmail.com%20|)[LinkedIn](https://www.linkedin.com/in/rohith-panjala-3906211a4)

# EDUCATION

## George Mason University, Virginia. December 2022 – December 2024

Master of Science in Data Analytics Engineering, Grade: 4.0 / 4.0

**Relevant Coursework:** Analytics and Decision Analysis, Applied statistics and Visualization for Analytics, Big Data Essentials, Principles of Data Management and Mining, Data Mining for Business Analytics, Analytics: Big Data to Information

## Osmania University, Hyderabad June 2016- May 2020

Bachelor of Technology in Electrical and Electronics Engineering, Grade: 3.1 / 4

**Relevant Coursework:** Data Structures, Python, Probability, Statistics, Computational Mathematics, Programming in C

# WORKEXPERIENCE

## Systems Engineer | Infosys limited, India. Jan 2021 - December 2022

* Participated in comprehensive training covering diverse technologies, including SQL, Python, and Java, culminating

in the independent development of a full-fledged E-commerce website as a capstone project.

* Proficiently employed Extract, Transform, Load (ETL) tools such as SSIS (SQL Server Integrated System) to proficiently

handle the seamless deployment of client customer data loads, ensuring data integrity and accuracy throughout the process.

* Collaborated closely with developers to craft intricate SQL queries, fostering streamlined interactions with databases and

enhancing data retrieval efficiency.

* Demonstrated adeptness in performing rigorous data quality validations, meticulously ensuring the precision and consistency

of raw data inputs. These validations played a pivotal role in facilitating accurate implementation of business logic.

* Implemented pagination mechanisms for processed data reports, skillfully presenting statistical analyses of the data.

This meticulous approach not only met but also exceeded business requirements, aiding informed decision-making and

strategic planning.

# PROJECTS

**Generative AI Retrieval-Augmented Generation (RAG) Chatbot for City Governments:**

Collaborated with a team to develop a scalable and secure Generative AI chatbot prototype for city government services using AWS. Leveraged Retrieval-Augmented Generation (RAG) architecture combining Amazon Kendra for intelligent search and Amazon Bedrock for high-performance foundation models. The project enhanced real-time citizen engagement by enabling the chatbot to provide accurate responses grounded in city public records while mitigating AI hallucinations through dynamic data retrieval. Integrated AWS Lambda, Lex, and DynamoDB for seamless serverless processing and real-time interaction handling.

**Technology/Tools:** AWS Kendra, Bedrock, Lambda, Lex, DynamoDB, Python, Machine Learning, Prompt Engineering.

**SkinGPT:**

Collaborated in a team to develop SkinGPT, an innovative AI-driven diagnostic tool for skin condition analysis, as part of our coursework in Natural Language Processing at George Mason University. This project merged advanced machine learning techniques, including YOLOv5 for image classification, with the LLaMA model for natural language processing to offer detailed, accessible health information via a user-friendly chatbot interface. Our system not only supports dermatologists by providing reliable second opinions but also enhances patient engagement and satisfaction by making dermatological care more accessible, particularly in underserved areas.

**Technology/Tools:** Machine Learning, Natural Language Processing, YOLOv5, LLaMA Model, Telemedicine, Patient Engagement.

**Machine Learning project for predicting patient survival and identifying key features related to heart failure:**

Predicting patient survival and identifying key features related to heart failure using machine learning. Emphasis on heart failure's global health significance and monitoring clinical features. Methodology includes pre-processing, variable selection,

and machine learning (Logistic Regression, K-Nearest Neighbors, Decision Trees, Random Forest).

**Technology/Tools:** R Programming: Data analysis, modelling, visualization, Shiny Web App: Interactive model presentation

**Social Media Sentiment Analysis using NLP:**

Analyzed sentiment of extensive Twitter data by pre-processing over 100,000 tweets, enhancing accuracy through tokenization, stop-word removal, and lemmatization/stemming techniques. Utilized Matplotlib and Seaborn for clear data visualizations, while employing the NLTK library alongside machine learning models (SVM, Naive Bayes, Random Forest) to accurately identify tweet sentiment.

**Technology/Tools:** NLTK, SVM, Naive Bayes, Random Forest, Matplotlib, Seaborn, Python.

# SKILLS

**Languages-** Python, R (Programming), C, PySpark, Java

**Web Development-** HTML, CSS, JavaScript

**Databases-** MySQL, Oracle DB, MongoDB, MS SQL Server

**Data Science-** NumPy, Pandas, SciPy, Seaborn, Scikit-learn, BeautifulSoup **Machine Learning-** Clustering, Regression, KNN, Decision Trees

**Deep Learning-** Natural Language Processing using NLTK and PyTorch,

**Tools & Framework-** Power BI, Tableau, Hadoop, Spark, Jupyter Notebook, Microsoft Excel, Word, Power Point, Visual Studio Code, R Studio, Azure Databricks, Analytical Solver

**Cloud services:** Amazon Kendra, Amazon Lex, Amazon DynamoDB, Amazon Bedrock

**Operating System-** Linux, MacOS, Windows

**Certifications-** Introduction to R (Datacamp), Introduction to Tidyverse (Datacamp), Modeling with Tidyverse in R (Datacamp), SQL and Relational Databases (IBM), Certificate of Completion in Python (Udemy), Tableau 2022 A-Z Hands- On Tableau Training for Data Science (Udemy), IBM Data Science Professional Certificate (Coursera).