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GANESH RAJ K

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EDUCATION

- **Master's in Data Science,** Rutgers University New Brunswick — May 2024
- **Bachelor's in Computer Science,** Indian Institute of Technology Indore — May 2019

TECHNICAL SKILLS

- **Programming Languages:** Python, R.
- **Libraries and Frameworks:** Git, Spark, PyTorch, TensorFlow, MongoDB, Postgres SQL, scikit-learn, Selenium. OpenCV, QGIS
- **Cloud:** lambda, S3, CloudWatch, Sage maker, IAM, EC2, Glue.

CERTIFICATIONS

- AWS Machine Learning Specialist
- AWS Cloud Practitioner

EXPERIENCE

Data Analyst, Rutgers University - Communications and Marketing ***Feb 2023 - Present, New Brunswick***

- Utilized Python to preprocess Rutgers Football matches ticket sales data from eVenue.
- Conducted correlation analysis between ticket sales and opponent teams using historical data, identifying key teams that drive sales and support.
- Developed Tableau dashboards to present insights, proposed and implemented targeted marketing strategies, leading to an 87% renewal in season ticket sales and a 34% increase in single game sales the following season.

Data Analyst, Deloitte Consulting ***June 2019 - Jan 2022, Bangalore***

Banking:

- Mitigated the COVID-19 lockdown-induced customer churn by constructing a multivariate logistic regression model. Identified churn-prone customers and contributing factors.
- Analyzed customer data using Python's Matplotlib and communicated results to stakeholders, resulting in a 30% churn reduction in the next quarter.

Restaurant chain:

- Clustered restaurant customers based on survey data using DBSCAN during lockdown. Correlated the results with their risk tolerance and safety behaviors using Tableau charts.
- This analysis provided a deeper understanding of each customer group. Strategic marketing, along with the promotion of safety protocols, led to an increase in take-away orders, enabling the restaurant chain to adapt to the new market conditions and maintain profitability.

Geospatial Intelligence:

- Addressed the challenge of manually identifying docked vessels by developing an object detection system using Mask R-CNN and OpenCV for change detection in Python.
- Accessed high-definition geospatial satellite imagery from the Sentinel API in Python and dehazed the images for better results.
- Extracted the geolocation data of the detected objects using QGIS.
- Automated the entire process using AWS Lambda and CloudWatch, saving over $100k in labor costs.
- Used Git for version control and maintaining code repository.

Key Achievement: Was recognized with applause award twice for my client centric work approach and timely deliverables.

Database Management Intern, MAQ Software ***May 2018 - July 2018, Hyderabad***

- Established an ETL pipeline using SQL Server Management Studio and SSIS, consolidating three large Azure data marts with over 2 million records into one. Developed triggers and stored procedures in place to identify inconsistencies during the transfer and maintain data integrity.

PROJECTS

Chatbot model with a personality: **[Github]**

- Built a generative AI (Gen AI) model chatbot to replicate Chandler Bing's dialogue style from "Friends," utilizing an extensive dataset of 8,700 dialogues. The model, featuring a seq2seq with 2-layer LSTM network with a dropout layer, achieved a BLEU score of 0.63.
- Parallelly fine-tuned Google's T5 small model with the same dataset for benchmarking purposes.

Twitter Search: **[Github]**

- Designed a web application with a local cache of 200 trending tweets, leveraging a combination of Postgres (relational) and MongoDB (non-relational) to query a dataset of about 120,000 tweets from 13,000 users.
- Applied NLP techniques for efficient search, including synonym search and Levenshtein distance, and managed API requests and the web app using Flask