⊠ rohan.gonjari@outlook.com

Portfolio

in linkedin.com/in/rohangonjari2504

PROFESSIONAL EXPERIENCE

Machine Learning Researcher | UMass Dartmouth | North Dartmouth, MA

Aug 2022 – Aug 2023

- Utilized GNNs, Neural Networks, K-means clustering, Support Vector Machines (SVMs), & Decision Tree models to implement supervised machine learning using graph data.
- Performed dimensionality reduction (PCA, t-SNE) to help visualize graph nodes & edges using Seaborn.
- Designed ML architectures to efficiently fuse information for multimodal data (EEG, fNIRS) to improve BCI-systems.
- Proposed model showcased a notable improvement in classification by 16.25% & 21.65% in two distinct studies indicating potential impacts on patient care.

Data Analyst | Destek Infosolutions | India

Aug 2020 – July 2022

- Collaborated with 120+ clients to implement GA4 via GTM to meet project requirements with a 95% success rate.
- Implemented A/B testing to ensure accuracy & reliability of data collected in GA4 when updating event triggers.
- Led a data sourcing project to establish a data pipeline, including cleansing, & feature selection using Python libraries.
- Applied regression models for targeted customer segmentation, resulting in a substantial 18% sales boost.
- Developed different Tableau dashboards to have more visibility of companies' sales portfolio & other KPIs.

PROJECTS

Sentiment Analysis of 2022 FIFA World Cup (Data Engineering, NLP)

• Extracted real-time sentiment data from Twitter's API, categorized FIFA World Cup tweets using VADER sentiment analysis, & deployed a scalable data pipeline on Amazon Airflow & EC2 for processing, storing results on S3.

Hospital Management System (Data Engineering)

• Established MySQL data architecture for Health Management System, performed ETL using Selenium for NHS surveys, & transformed prescription data with NumPy & Pandas for loading into the HMS database.

Evaluating Medical Condition of Patients (Data Analysis, Machine Learning)

 Diagnosed patient health based on predicted health scores using EDA & modeling. Leveraged Random Forest & Gradient Boosted Decision Tree models with significant & engineered features to predict health scores.

Parallelizing Conway's Game of Life (Parallel Computing, Automation)

• Utilized high-performance scientific techniques to scale cellular grid simulation on multiple cores. Achieved efficiency of 5.5 times when scaling automation problem to 8 cores compared to a sequential run.

Visualizing Olympics Performance (Data Visualization) ☑

• Leveraged D3.js, HTML, & CSS to create an interactive visualization of Olympics athlete data to identify medal-winning factors & country-level correlations.

TECHNICAL SKILLS

• **Technologies** : Python, MATLAB, R, SQL, MySQL, SAS, Java, Tableau, Power BI, CUDA, Docker, PowerShell,

Google Analytics, Google Tag Manager, Linux

Libraries : PyTorch, TensorFlow, Pandas, NumPy, PySpark, XGBoost, NLTK, OpenCV, Ggplot, Selenium

• Cloud : AWS, SageMaker, S3, Snowflake, EC2, Airflow

• Expertise : Statistical Modeling, Market Mix Modeling, Predictive Analytics, ETL Tools, Deep Learning, Data

Wrangling, Data Analysis

EDUCATION

University of Massachusetts Dartmouth | North Dartmouth, MA

Sept 2021 – Aug 2023

Master of Science in Data Science

• Coursework: High-Performance Parallel Computing, Advanced Data Mining, Deep Learning, Data Visualization, Data Architecture & Design, Business Analytics, Graph Neural Networks

National Institute of Technology Karnataka (NITK) | Surathkal, India

July 2016 – June 2020

- Bachelor of Technology in Electronics & Communications Engineering
- Coursework: Numerical Analysis, Discrete Mathematics, Data Structures & Algorithms, Statistical Analysis

PUBLICATIONS

- Multimodality-enhanced graph generation and multimodality-driven graph convolutional networks. 🗗
- Context-aware Multimodal Auditory BCI Classification through Graph Neural Networks.
- Adversary on Multimodal BCI-based Classification.

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