### 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 and edges using Seaborn.
- The novel GNN architecture can combine information from multiple modalities (multimodal) to improve BCI-Systems.
- Novel model showcased a notable improvement in classification by 16.25% & 21.65% in two distinct studies indicating potential impacts on patient care (<u>Master's Thesis</u>).

#### 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 initiative to establish a robust pipeline, including data sourcing, cleansing, and feature selection using NumPy and Panda's 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

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

## **Hospital Management System (HMS)**

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

#### **Evaluating Medical Condition of Patients**

• Diagnosed patient health based on predicted health scores using EDA and modeling. Predicted scores using regression model with Cross-Validation & Recursive Feature Elimination with significant & engineered features.

# **Visualizing Olympics Performance** | *Link*

Sourced Olympics data between 1960 – 2016 to build interactive visualizations using D3.js, HTML, & CSS.

# **TECHNICAL SKILLS**

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

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

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

• **Skills** : 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**

- Kumar, C., Rahimi, N., Gonjari, R., McLinden, J., Hosni, S.I., Shahriari, Y. and Shao, M., 2023, July. Context-aware Multimodal Auditory BCI Classification through Graph Neural Networks. In 2023 45th Annual International Conference of the IEEE Engineering in Medicine & Biology Society (EMBC) (pp. 1-4). IEEE.
- Kumar, C., Donohue, J.P., Gonjari, R., Rahimi, N., McLinden, J., Shahriari, Y. and Shao, M., 2023, April. Adversary on Multimodal BCI-based Classification. In 11th International IEEE EMBS Conference on Neural Engineering.