ESHAN JAIRATH

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PROFESSIONAL SUMMARY

AI Engineer and **Microsoft Certified Azure Data Scientist** adept at developing predictive models, and advanced machine learning solutions. Skilled in data analysis, system enhancements, and leveraging Azure to drive impactful results.

WORK EXPERIENCE

Data Scientist, IMIS Global Limited, Newcastle, England, United Kingdom. *(Feb 2023 - Present)*

- Designing **enhanced reinforcement learning models** to smooth the movement of shipping at local and global levels.
- Innovating the use of large historical and real-time data in developing predictive and more reliable models.
- Developing AI and data model outputs and system enhancements according to the key aims of the Organization.

Academic Research, Northumbria University, Newcastle, England, United Kingdom. *(July 2022- Sept 2022)*

- Conducted academic research on flood extent prediction using **geospatial data** extracted from the google earth engine and build a machine-learning regression model tested with NSE (Nash–Sutcliffe model efficiency coefficient) and RMSE scores to justify the reliability of the model.

Data Science Intern, Capgemini, Delhi, India. *(Dec 2020 – May 2021)*

- Developed and fine-tuned machine learning models, including **regression**, **classification**, and **clustering** algorithms, to **solve real-world business challenges** and optimize decision-making processes for potential clients.
- Designed and implemented **data visualization** dashboards using **Power BI**, effectively communicating complex findings to stakeholders and driving data-informed decision-making.
- Assisted in the development of **data pipelines** and **ETL (Extract, Transform, Load) processes**, ensuring efficient data integration and maintenance.

EDUCATION

- MSc. Artificial Intelligence, Northumbria University, Newcastle, United Kingdom, **Grade - 2:1**, (2021 – 2022).
- B. Tech. Computer Science Engineering, SRM University, Delhi NCR, India, **Grade – First Class**, (2016 – 2020).

SKILLS

- **Programming** - Python, JavaScript.
- **Data Structures and Algorithms.**
- **GIS** – Google Earth Engine
- **Database** - MongoDB, ***SQL***, Firebase.
- **Cloud** - Microsoft Azure
- **Version Control** – Git and GitHub
- **Data Visualization** – Microsoft Power BI.
- **System Analysis and Design**
- **Problem Solving & Project Management.**
- **Machine learning & deep learning** – Scikit-learn, TensorFlow, Pandas, computer vision, Neural Networks, NLP, Reinforcement learning, ETL pipelines.
- **Web Development –** JavaScript, React, HTML, CSS

PROJECTS

- Developed a **Reinforcement Learning model** to **predict the trajectory of a cargo vessel** using historic AIS data and GIS data of a location. Used to forecast the Estimated Time of Arrival (ETA) of the vessel, enhancing port operations.
- A **CNN (Convolution Neural Network) model** trained on the CIFAR-10 dataset, which gives 86% accuracy on the test set and manages to predict random images from every category in the dataset correctly.
- Developed a **Generative Adversarial Network (GAN) model** to create realistic and novel Anime Faces. Trained on a large dataset of existing Anime Faces, enabling it to generate high-quality and unique character Images.
- Developed a review prediction system designed to automatically classify customer reviews of restaurants as positive or negative. The system utilizes **advanced Natural Language Processing (NLP)** techniques and machine learning algorithms.
- **Flask-based web Application with Machine Learning API** backend to help users predict the risk of Heart Failure.
- **Flood extent prediction model** with the ultimate goal to assist disaster management efforts by providing accurate predictions of floodwater percentages, which can be used to inform evacuation decisions in high-risk areas.
- Incorporated **SARIMA time series modeling** to forecast store sales, utilizing Pandas, NumPy, and Stats models libraries. Demonstrated the ability to analyze time series data and derive valuable business insights for inventory planning.