# **Hemansh Anand**

Portfolio Website Sponsorship Not Required- Post Study Work (PSW) permit under Graduate Route

#### **EDUCATION**

MSc Data Science

University of Surrey

Guildford, United Kingdom

**MSc Applied Economics and Statistics** 

University of Strathclyde

Sep 2019 – Sep 2020 Glasgow, United Kingdom

Feb 2020 - Present

**B.Tech Electronics and Communication Engineering** 

Jaypee Institute of Information Technology

Aug 2015 – Aug 2019 Noida, Delhi (NCR), India

### **PROJECTS PORTFOLIO**

# Facial Expression Recognition using Deep Learning ☑

Jun 2021

Classification Problem

- **Primary Goal**: Build an efficient model to categorize facial expressions into different 7 emotions.
- **Solution**: Trained a CNN in Keras from scratch to recognize facial expressions in real-time.
- **Result**: Achieved an accuracy of %.
- Technology: Dataset ICML Face Data | Python | TensorFlow | OpenCV | Keras | Flask

### Movie Genre Prediction using Natural Language Processing(NLP) □

Apr 2021

Multi-Label Classification Problem

- Primary Goal: Build an interactive Web App to predict movie genres based on their plot descriptions
- Solution: Applied various NLP techniques and ML Algorithms to classify movies as one or more genres
- **Result**: Achieved Precision Score of 88% and Recall Score of 82% using One vs Rest Classifier with Multnimoial Naive Bayes using TF-IDF plot vectors (min\_df=20) and Min-Max Scaling.
- Technology: Dataset IMDB Movies | Python | SQL | Bag of Words | Standard Scaling | Logistic Regression | Flask

# Airlines Passenger Forecasting 🖸

Apr 2021

Regression Problem | Time Series

- Primary Goal: Develop a model to predict the number of international airline passengers in units of 1,000.
- Solution: Applied various NLP techniques and ML Algorithms to classify movies as one or more genres
- **Result**: Minimum mean squared error of 10.80% achieved.
- Technology: Dataset Air Passengers By Kaggle | Python | LSTM | Matplotlib | Flask

### **PROFESSIONAL EXPERIENCE**

#### **Data Science Intern**

May 2021 - Aug 2021 | Gurgaon, India

RFS India Pvt. Ltd

- Pitched directly to the Regional Manager a **+15% gross margin** expansion opportunity and a price predicting model to forecast revenue.
- Designed an end-to-end ML pipeline for pre-processing (raw) client data, feature engineering, feature selection, model training and testing. Predictions included if a customer would purchase a product or not, and the quantity they would buy.
- Implemented Churn Prediction and Market Basket Analysis to increase customer lifetime value and customer retention rate by 20%

### **Energy Data Analyst Intern**

Sep 2020 - Dec 2020 | Faridabad, India

NTPC India Ltd

- Pitched directly to the Regional Manager a +15% gross margin expansion opportunity, a price predicting model to forecast revenue, and improved customer acquisition rate by 15%
- Designed an end-to-end ML pipeline for pre-processing (raw) client data, feature engineering, feature selection, model training and testing. Predictions included if a customer would purchase a product or not, and the quantity they would buy.
- Implemented Churn Prediction and Market Basket Analysis to increase customer lifetime value and customer retention rate by 20%

### **SKILLS**

**Languages & Aptitudes** (Python, C, R, Tensorflow, Keras, pyTorch, Numpy, Pandas, Matplotib, Plotly, Tableau), **Regression** (Logistic, Linear, MultipleLinear, Random Forest), **Classification** (K-NN, SVM, Random Forest, Naive Bayes), **Neural Networks** (ANN, CNN & LSTM-RNN), **Database** (MySQL, MongoDB), **Frameworks & Cloud Services** (Flask, Dash, Django, AWS, Microsoft Azure)