Praxal Patel

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EDUCATION

Center for Data Science, New York University (GPA: 3.9/4.0)   *New York, NY*
Master of Science in Data Science   *Aug 2019 – May 2021*
Relevant Coursework: Probability and Statistics, Introduction to Data Science, Programming for Data Science, Natural Language Understanding, Machine Learning, Big Data, Deep Learning, Probabilistic Time Series Analysis, Natural Language Processing

Institute of Technology, Nirma University   *India*
Bachelors of Technology in Computer Engineering   *Aug 2015 – May 2019*

SKILLS

Tools & Technologies: Tensorflow, Scikit-Learn, Keras, PyTorch, Tableau, Pandas, Matplotlib, OracleDB, MS Excel
Programming Languages: Python, Java, SQL, C++, R, Hadoop, Spark

EXPERIENCE

Data Analyst, Wellness Space   *India*
Center to put together and share various aspects of spiritual, emotional, mental and physical wellness   *Jan 2019 – May 2019*
- Engaged in analyzing Heart Rate Variability through 24-hours ECG signal data using SVM and LSTM models to predict a person's state of emotional arousal and analyzed key parameters associated with mental stress.
- Involved in deploying a self-monitoring application using ECG data to help clients monitor their stress levels and understand the effect of various activities on their heart rate; Performed anomaly detection on the ECG data for artefact correction.

Research Scholar, Iowa State University   *Ames, IA*
Advisor: Professor Goce Trajcevski   *May 2018 – Jul 2018*
- Used Check-ins from various Location Based Social Networks, to link given trajectories to their corresponding users, using LSTM, GRU and Bi-Directional LSTM and compared the results on Gowalla and Brightkite Dataset
- Developed a Streambase application to aid decision-making for real-world problems in the field of finance

ACADEMIC PROJECTS AND RESEARCH

SentenceBERT_Score: A novel metric for evaluating Summarization Tasks   *Feb 2020 – Jun 2020*
- Produced sentence embeddings for reference text and summarized text and computed the cosine similarity between them for evaluating the quality of summarization. (Dataset: BBC News Articles)
- Evaluated summarization score for human generated summaries and state-of-the-art model generated summaries.
- Validated SentenceBERT_Score correlates better to human evaluation than traditional evaluation metrics like ROUGE and BLEU.

Job Recommendation Engine   *Oct 2019 – Dec 2019*
- Web-scraped job postings for "Data Scientist" jobs and relevant resumes of candidates from New York City.
- Used Natural Language Toolkit for extracting keywords about pertinent skills from job descriptions and resumes.
- Developed a Recommendation Engine using Cosine Similarity and utilized Hit Ratio for evaluating the performance of the system.

Prediction of Emergency Station Locations Using Deep Learning and Machine Learning Techniques   *Jul 2018 – Jan 2019*
- Identified detection parameters like population density, traffic, navigation, frequency of ambulance call, etc.
- Researched various Deep Learning Models to see which one suited best for Travel Time Prediction and predicted the travel time between every two given points in NYC by training a XGBoost model using NYC Taxi Trip Dataset
- Incorporated an algorithm driven by K-Medoids and used travel time instead of distance to predict new locations of the Emergency stations; web-scraped the coordinates and labelled them as belonging to land or water.

Diabetic Retinopathy Detection Using Deep Learning   *Jan 2018 – Jun 2018*
- Researched different types and stages of diabetes and consulted ophthalmologists regarding diagnostic techniques
- Identified Hard Exudates, Soft Exudates, Microaneurysm and Haemorrhages as the key factors for detection using CNN models and used the Ensemble Method to ascertain the stage of Retinopathy and significantly reduce the False Negatives
- Performed Data Augmentation and Image Segmentation using Attention UNet; Conducted experiments for the purpose of generalization, using the datasets Messidor (1200 images), DiaretDB0(130 images) and DiaretDB1(84 images)

POSITION OF RESPONSIBILITY

Graduate Researcher under **Prof. Zhan Guo** - *Analyzed how Lyft is responsible for reduction in cases for DUI*   *Jan 2020 – May 2020*
Junior Data Scientist at NYU CDS under **Prof. Alec Marantz** - *Developed automated neural data analysis*   *Jun 2020 – Aug 2020*
for classifying neuro-typical and atypical population
Research Assistant at NYUAD - *Understanding Indonesia's scorched earth policy using news and satellite data*   *Jun 2020 – Present*
Teaching Fellow for Data Science Bootcamp at NYU STERN under **Prof. Benjamin Zweig**   *Sep 2020 – Dec 2020*

RECENT PROJECTS

- Book Recommendation System using Big Data Tools
- An Exploratory Analysis of India's Foreign Trade - "Best Data Visualization" 2020 CDS Academy Award.