POOJITHA KALE

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TECHNICAL SKILLS

PROGRAMMING LANGUAGES: Python, SQL, MATLAB, C
DATA SCIENCE: Pandas, NumPy, SciPy, Scikit-Learn, Data Visualization (Tableau, Matplotlib), PySpark
MACHINE LEARNING: Time-Series Analysis, NLP, Deep Learning, Random Forest, K-means, SVM, Gradient Descent, Naïve Bayes, Neural Networks (CNN, RNN, LSTM), Unsupervised Learning (Clustering, PCA)

PROJECT EXPERIENCE

DATA SCIENCE FELLOW - THE DATA INCUBATOR   SEP 2019 – NOV 2019

- Built an ARIMA model that would forecast if a country would reach the target of 100% access to electricity by 2030 with its current trend of investment in renewable energy, population growth and technological expansion
- Constructed an automated custom web-scraper to crawl through the captions of photos from NYC Social Diary to build a complex network graph analyzing social interactions for the NY Elite
- Custom built estimators and workflow pipelines using natural language processing to predict ratings for restaurants in NYC that plan to open new branches with an accuracy of 97%
- Developed a restaurant violation record keeping database of violations from the past 10 years in the NYC area using SQL
- Designed a program in Spark to predict accurate tags for user posts in stack overflow with an accuracy of 96%

MASTERS THESIS – PENN STATE   JAN 2017 – MAY 2019

- Quantified the amount of information flow during a seizure to locate its origin with high accuracy to aid doctors performing surgeries on patients suffering from the neurological disorder called Epilepsy
- Collaborated with doctors at the Penn State School of medicine to collect patient data and medical information to discuss and promote the need for this research in the treatment of patients with Epilepsy
- Published and presented my research at two different biomedical conferences to discuss the merits offered by Transfer Entropy over the existing diagnostic techniques

DETECTION OF SEIZURES IN EPILEPTIC EEG CHANNELS - COURSE PROJECT   JAN 2018 – MAY 2018

- Binary classification of EEG signals into seizure or seizure-free for patients with Epilepsy to reduce time and costs for labeling data
- Classification was based on features extracted from two signal processing techniques - STFT and Wavelet transform - achieving a prediction accuracy of 85.7% for STFT and 80% for wavelet transform

WORK EXPERIENCE

SUMMER INTERN - THE ELECTRONICS CORPORATION OF INDIA LIMITED   JUNE 2015

- Implemented an advanced encryption standard (AES 128) to encode highly sensitive information at the logic gate level using Verilog code to ensure it isn't prone to adversarial attacks during transmission

SUMMER INTERN - SOHAR ALUMINUM   JUNE 2014

- Programmed a miniature automation industry setup using concepts of logic gates, electrical connections, sensors, electro pneumatics and hydraulics using Allen-Bradley's programmable logic circuits

EDUCATION

M.S. IN ELECTRICAL ENGINEERING, THE PENNSYLVANIA STATE UNIVERSITY   MAY 2019
B.E. IN ELECTRONICS AND COMMUNICATION ENGINEERING, ANNA UNIVERSITY   MAY 2016