Vedant Dave

www.linkedin.com/in/vedant-dave

(908) 240-3379 | vad2134@columbia.edu | https://github.com/vedantdave18

Education

Columbia University *New York, NY*

M.S. in Electrical Engineering (Data Driven Analysis and Computation) *Aug 2019 - Dec 2020*

- Courses: Deep Learning, Big Data Analytics, Content Storage & Distribution, Machine Learning, Databases
- GPA : 4.0

Institute of Technology, Nirma University *Ahmedabad, IN*

B.Tech in Electrical Engineering *Jul 2015 - May 2019*

- Rank: 15/150

Experience

Hitachi Hi-Rel Power Electronics Ltd. *Gandhinagar, IN*

Intern - Power Electronics *Jun 2018 - Jul 2018*

- Debugged and rectified errors in broken electric panels of Uninterrupted power supply's (UPS's).
- Developed a statistical model which showcased the efficiency of different tests performed on the various power electronic machines and helped the methodology become more robust by increasing the efficiency by 6 percentage points.

Soni Energy Solution *Ahmedabad, IN*

Intern - Power Systems & Electrical Machines *Jun 2017 - Aug 2017*

- Gained hands-on experience about maintenance of various electrical machines by regular onsite visits.
- Analyzed various transmission parameters on SCADA and generated output reports of machine performance with optimized changes on weekly basis.

Projects

Wildfire Exploratory Visualizations and Machine Learning *Columbia University, NY*

Keywords: Random Forest Classifier, RESTful API, D3, ReactJS, EDA, Google Cloud *Sep 2019 - Dec 2019*

- Engineered a model to predict the different causes of wildfire in the varied states of America by employing Random Forest Classifier algorithm on the dataset constituting of 1.88 million wildfires ranging from 1992-2015 geo-referenced through latitude and longitude coordinates.
- Analyzed the dataset through numerous data visualizations and statistical inferences to understand the distribution of wildfires across different states, their intensities and the major causes behind them.
- Designed a dynamic web-app and deployed the model on Google Cloud through RESTful API interaction & Flask in the business layer, MongoDB & PyMongo Interface in the data layer, and ReactJS, D3, ChartJS, CanvasJS, jQuery, Bootstrap in the Frontend, to provide for user interface.

Twitter Data Streaming, Sentiment Analysis, and Caching Recommendations *Columbia University, NY*

Keywords: Twitter API, DStream, SQL, HTTP socket handler *Sep 2019 - Dec 2019*

- Experimented with Twitter standard API key to access the streaming data created by user tweet generation.
- Defined specific tags as the standard key requires that all streaming clients define a set of tags, used HTTP socket handler and "tweepy" Twitter API client for ease of access to data.
- Cleaned the data by dropping all alpha-numeric characters and collected the set of tags by running the program for 20 minutes, intermediate data from each aggregated DStream object was stored into Google Cloud Storage Bucket, after the end of simulation data collected was parsed into SQL database and hashed it to get the most popular hashtag in least cost time, thereby doing the sentiment analysis.

Industrial Power Control by Integral Cycle Switching without generating Harmonics *Nirma University, IN*

Keywords: ICC, Arduino, Harmonics, MATLAB, FFT Analysis *Jan 2019 - May 2019*

- Simulated and designed a hardware and software model wherein the power was controlled by a method called Integral Cycle Control(ICC) via arduino programming and MATLAB Simulink.
- Implemented ICC as it contains converters which have the ability to perform lossless direct switching by directly converting AC to AC without having to perform the intermediate processes of AC to DC then DC to AC.
- Devised a method incorporating Fast Fourier Transform Analysis(FFT) to convert the signal from its original domain that is time to a representation in the frequency domain and generated almost zero lower order harmonics making the model highly efficient.

Skills

Technical Tensorflow, Keras, Spark, Scikit learn, Javascript, Matplotlib, PSCAD, Data manipulation & Visualization

Languages Python, SQL, MATLAB