DHARA MUNGRA

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EDUCATION

New York University, Center for Data Science New York, NY
Master of Science in Data Science | **GPI: 3.93/4** May 2021

- **Relevant Coursework:** Probability and Statistics, Introduction to Data Science, Machine Learning, Big Data, Natural Language Understanding, Programming For Data Science, Deep Learning

Nirma University, Institute of Technology Ahmedabad, India
Bachelor of Technology in Computer Engineering | GPI: 8.15/10.00 | **Merit-Based Scholarship** May 2019

SKILLS

Python, SQL, LaTex, C, C++, PySpark,TensorFlow, OpenCV, PyTorch, Scikit-learn, Keras, Pandas, Matplotlib, NumPy

EXPERIENCE

NYU Department of Environmental Studies*, Graduate Assistant, New York, NY* July 2020 - Present

- Scrape and query public funding/grantmaking databases to create simple databases and high-quality visualizations.
- Name Entity Recognition and Topic Modelling to ascertain how public dollars were spent on a particular grant and project.

NYU Data Science & Software Services *Junior Data Scientist,* New York, NY May 2020-August 2020

- **Understanding Cosmic Rays via Machine Learning**
  - Designed a neural network to predict ultrahigh-energy cosmic ray's (UHECR) Xmax value using time series signals generated by UHECRs and stationary information about detectors with the error of 0.12.
- **Textual and sentiment analysis for trading**
  - Processed million-row data from CRSP and Compustat, merged various tables through SQL to get daily stock prices and returns for S&P 500 index constituents.
  - Implement Regression models to model the impact of news signals- derived using NLP techniques like Named Entity Recognition and Entity based sentiment score on market volatility.

NYU Courant Institute of Mathematical Sciences*, Graduate Research Assistant, New York, NY* January 2020-May 2020

- Compared the performance of six ML techniques- Linear Regression, Decision Tree, Random Forest, k-Nearest Neighbours, ANN, and Support Vector Regression to predict the performance of a parallel program on a parallel machine.
- Attained 0.19 MSE and 0.82 R2 score using Decision Tree.

EpisodicLabs, India: *Machine Learning Intern, Ahmedabad, India* January 2019-April 2019

- Performed analysis and visualization for data collected from 50 subjects aged between 18- 48 years for various physical activities.
- RNN-LSTM gives an accuracy of 94 percent for the classification of the data to identify different physical activities on the basis of accelerometer and gyroscope values.

ACADEMIC PROJECTS (NYU)

Helping DonorsChoose choose data-driven recommendations strategies October 2019 - December 2019

- Applied NLP techniques such as Named Entity Recognition and Topic Modelling for extracting text-based features and clustering to handle missing values and categorical features.
- Performed recommendations using content-based filtering and predictions from XG-Boost for the DonorsChoose.org data. Attained AUC of 0.95 and MAP (mean average precision) score of 0.04.

An Exploratory Analysis of India's Foreign Trade October 2019 - December 2019

- Performed data cleaning, feature engineering, data mining, data analysis and visualizations for the scraped export and import data to gain useful insights regarding the trade and country's evolving trade relations with other countries

Goodreads Book Recommendation System March 2020 - May 2020

- Implemented Spark's ALS (Alternating Least Squares) model and visualized book clusters using t-SNE. Achieved MAP (mean average precision) score of 0.062.

PUBLICATIONS

- Thakkar, A., **Mungra, D.**,& Agrawal, A. (2020). Sentiment Analysis: An empirical comparison between various training algorithms for Artificial Neural Network In *International Journal of Innovative Computing and Applications* (In Press).
- **Mungra, D**., Agrawal, A., & Thakkar, A. (2020). A Voting-Based Sentiment Classification Model. In *Intelligent Communication, Control and Devices* (pp. 551-558). Springer, Singapore.
- **D. Mungra**, A. Agarwal, P. Sharma, S. Tanwar, M. S. Obaidat, Emotion Recognition from Facial Images using CNN: An Enhanced Model using Histogram Equalization and Data Augmentation", Multimedia Tools and Applications, In Press, pp. 1-26, 2019.