DEEPTI SRIVASTAVA TILLY

deeptitilly@gmail.com 8322175235 3971 Gouverneur Ave, #4F, The Bronx, NY 10463
linkedin.com/in/deeptistilly deeptitilly/Projects

TECHNICAL SKILLS

Python, SQL (MySQL, PostgreSQL), Matlab, Shell Scripting, Data Cleaning and Wrangling, EDA and Data Visualization, Monte Carlo Simulations, Jupyter, Inferential Statistics (Hypothesis Testing, Bootstrapping), Natural Language Processing, Git, MS Excel, Machine Learning (Linear and Logistic Regression, Random Forest, kNN, Decision Trees, SVM, Naive Bayes, K-Means Clustering)
PYTHON LIBRARIES: Pandas, Numpy, Scipy, Scikit-Learn, Statsmodels, SHAP, Matplotlib, Seaborn, NLTK, Keras

EDUCATION

Springboard, Concentration in Natural Language Processing Mar. 2019 - Current
Data Science Fellow

North Carolina State University Dec. 2017
Ph.D. Computational Chemical Engineering 2017
Dissertation Title: Monte Carlo Simulations of Confined Chemical Reactions and Protein-Polyelectrolyte Complexation
Overall GPA: 3.84

The University of Texas at Austin May 2011
B.S. Chemical Engineering 2011

EXPERIENCE

Data Science Fellow Mar. 2019 - Current
Springboard
• Sentiment Analysis Predictor of Political Twitter Data: Incorporated lexicon-based methods to label unstructured, text data from Twitter related to the 2020 presidential candidates. Performed feature extraction (Bag-of-Words, TF-IDF) and utilized supervised ML algorithms (Logistic Regression, Naive Bayes, Random Forest) to analyze and predict the sentiment around presidential candidates. Used unsupervised learning (LDA, NMF) to perform topic extraction on relevant tweets.
• Using Machine Learning to Predict Movie Success: Performed Regression and Classification (Linear and Logistic Regression, Random Forest, Decision Trees, kNN, SVM) to predict revenue, ROI, and categorical outcome (e.g. hit, break-even, flop). Incorporated feature engineering to enhance model performance, performed feature selection using Gini Importance, utilized Cook's Distance for outlier detection and analysis, and used Shapley values to improve model interpretability.

Associate Strategy Consultant May 2018 - Dec. 2019
Triangle Insights Group
• Worked closely with and presented to C-level executives of pharmaceutical companies to successfully evaluate commercial potential of assets and develop portfolio strategies for a multitude of high-profile projects.
• Gathered, interpreted and organized input from stakeholders through in-depth market research to develop key project insights.

Graduate Research Assistant Aug. 2012 - Dec. 2017
North Carolina State University
• Utilized Computational (Python) and Statistical (Monte Carlo) techniques to successfully solve a research problem that had been unresolved for the past 15 years.
• Extensive data manipulation and data visualization experience with Python, Shell scripts, Gnuplot, Matplotlib and Visual Molecular Dynamics (VMD).
• Presented work at 8 national and international conferences and published 3 journal articles, with 1 paper featured on the cover of a journal (Langmuir).
• Taught over 200 students as a teaching assistant for undergraduate and graduate chemical engineering courses and was recognized as a finalist for the Praxair Exceptional Teaching Assistant Award.

Research Engineer Oct. 2011 - July 2012
The University of Texas at Austin
• Utilized experimental techniques to lead a pharmacology project to enhance the effectiveness of pulmonary drug delivery devices, such as inhalers.
• Co-authored a book chapter in Polymers for Pulmonary Drug Delivery.