Aashita **Kesarwani**

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Education

PHD IN MATHEMATICS   *Aug 2012 - Dec 2017*
Tulane University   *New Orleans*
- Worked in Number Theory. Teaching assistant for the undergraduate courses – Introduction to Probability and Statistics, Statistics for Scientists, Statistics for Business, Calculus - I, II and III.

COURSERA MOOCS
- Machine Learning by Stanford University
- Deep Learning Specialization by deeplearning.ai
    1. Neural Networks and Deep Learning
    2. Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization
    3. Structuring Machine Learning Projects
- Applied Data Science with Python Specialization by University of Michigan
    1. Introduction to Data Science in Python
    2. Applied Plotting, Charting and Data Representation in Python
    3. Applied Machine Learning in Python
    4. Applied Text Mining in Python

5-YEAR INTEGRATED MS IN APPLIED MATHEMATICS   *Aug 2007 - May 2012*
IIT(Indian Institute of Technology)   *Roorkee, India*
- GPA – 8.6 out of 10 (Second highest GPA among math majors). Relevant coursework: Computer Systems and Programming, Data Structures, Database Management Systems, Artificial Neural Networks

Programming

Languages/APIs	**PYTHON** (NumPy, SciPy, *pandas*, Matplotlib, seaborn, plotly, **scikit-learn**, nltk, markovify, sqlite3), XGBoost, TensorFlow, Keras, MATLAB, C++, R, MySQL
Miscellaneous	MS-Excel, LaTeX, Git, Jupyter Notebook, Google Cloud Platform

Projects

ANALYZING COMMENTS POSTED ON NEW YORK TIMES ARTICLES
- Contributed a dataset, that was among the 20 featured datasets on Kaggle, comprising over 1.2 million comments with 34 variables and over 9,000 articles with 16 variables along with an exploratory kernel analyzing the variables and their inter-relationship with statistical graphs. More on: https://www.kaggle.com/aashita/nyt-comments
- Built two bag-of-words models to predict the probability that a certain comment will be selected as a NYT's pick.
- Trained a bot to comment on current affairs using the Markov chain model on the above dataset.

KAGGLE COMPETITIONS
- Toxic comment classification (Top 32% with the performance score (ROC AUC) of 98.5%)
- Titanic Survival prediction (Top 4% with 82% accuracy)

Packages

BUBBLY
- An easy-to-use python package for plotting interactive and animated bubble charts, that can accommodate six variables in total viz. X-axis, Y-axis, time, dots, their size and their color in a compact and captivating way with plenty of customization and can be used with plotly.

NYTCOMMENTS
- A Python package that performs three distinct tasks involving the retrieval of comments' and articles' from New York Times as ready-to-use dataset for data science/machine learning projects:
    1. Function get_dataset returns two dataframes - articles' and the respective comments' with the retrieval customized based on a number of parameters – timeline for the articles, search keywords, filter queries, etc.
    2. Function get_articles is an API wrapper for NYT article search API, that returns cleaned up and processed data for articles as a ready-to-use pandas dataframe (or csv files) with the same customization options as above.
    3. Function get_comments retrieves the comments on NYT article(s) given their URLs. It can be used as a substitute for the comments by URL option in the now-deprecated NYT Community API.