Aashita **Kesarwani**

(+1) 313-455-8850 | contact@aashitak.com | www.aashitak.com
AashitaK | aashita | aashita-kesarwani

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).

Programming

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

Projects

Toxic comment classification (Kaggle competition hosted by Conversation AI)

- Built a multilabel classification model to detect six different types of toxicity in comments such as threats, obscenity, insults, identity-based hate, etc. Model, that is a neural network built using GloVe word embeddings and bidirectional LSTM layer, resulted in a performance score (ROC AUC) of 98.5% on unseen comments.

2018 NCAA Division I Men's and Women's Basketball Championships predictions

- Built a model to predict the outcomes of all possible match-ups among the final 64 teams based on features engineered from the past regular season and tournament games, team rankings, tournament seeds, etc.

Titanic Survival prediction (Top 3% in Kaggle competition)

- Built a classification model to predict the survival of passengers on Titanic ship based on their gender, age, ticket fare, title, etc. using feature engineering and Extreme Gradient Boosting (XGBoost) algorithm.

The effect of recession on the housing prices

- Tested the hypothesis that the mean housing prices of university towns are less affected by recession as compared to other towns using data obtained from Zillow research, Bureau of Economic Analysis and wikipedia.

An SVM-cum-Decision Tree Approach to binary classification

- Implemented a hybrid support vector machine based decision tree for binary classification in MATLAB. The tree first classifies the points as far off or close to the decision boundary, and then SVM is used only for the latter points to speed up the process. Worked with Kalpna Gupta.

Plotting record temperatures for New Orleans

- Plotted the temperature trends in an informative and clear graph using data extracted from GHCN-DAILY posted as a blog in my website along with the python code. Tools used: pandas and matplotlib.