Aashita **Kesarwani**

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Education

PhD in Mathematics — *Aug 2012 - Present*

Tulane University — *New Orleans*

- Working in Number Theory. Submitted two papers. Expecting to graduate in December 2017.
- Teaching assistant for the undergraduate courses – Introduction to Probability and Statistics, Statistics for Scientists, Statistics for Business, Calculus - I, II and III.

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)
- Courses taken:
  - Artificial Neural Networks
  - Probability and Statistics
  - Statistical Inference
  - Multivariate Techniques
  - Database Management Systems
  - Data Structures
  - Linear Algebra
  - Graph Theory
  - Computer Systems and Programming
  - Discrete Mathematics
  - Operations Research
  - Mathematical Modeling

Coursera MOOCs — *Aug 2016 - Present*

- Neural Networks and Deep Learning by deeplearning.ai
- Machine Learning by Stanford University
- Introduction to Data Science in Python by University of Michigan
- Applied Plotting, Charting and Data Representation in Python by University of Michigan
- Applied Machine Learning in Python by University of Michigan
- Using Databases with Python by University of Michigan
- Using Python to Access Web Data by University of Michigan
- Python Data Structures by University of Michigan
- Programming for Everybody by University of Michigan
- Capstone: Retrieving, Processing, and Visualizing Data with Python by University of Michigan

Programming

Languages	**Python** (NumPy, SciPy, ***pandas*****, Matplotlib**, scikit-learn, **sqlite3**, urllib, BeautifulSoup), **MATLAB**/Octave, C++, R, **MySQL**
Miscellaneous	Mathematica, MS-Excel, LaTeX, **Jupyter Notebook**, Git

Projects

An SVM-cum-Decision Tree Approach to binary classification. — *Nov 2011*

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

The effect of recession on the housing prices — *Jan 2017*

- The hypothesis that the university towns have their mean housing prices less effected by recessions was tested. The data was obtained from the Zillow research, Bureau of Economic Analysis and wikipedia in different formats, manipulated using pandas and then tested using scipy.stats.

Plotting record temperatures for New Orleans — *Feb 2017*

- The record highs and lows in the temperature over the period 2005-2014 was plotted as line graphs and the record breaking temperatures for 2015 was scattered over as red and blue dots using matplotlib. The data was extracted from GHCN-DAILY and manipulated using pandas.