Aashita **Kesarwani**

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Education

Coursera MOOCs
Aug 2016 - Present

- 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
- Python for Everybody Specialization by University of Michigan consisting of 5 courses

PhD in Mathematics
Aug 2012 - Dec 2017

Tulane University
New Orleans

- Worked on thesis titled *Theory of the generalized modified Bessel function $K_{z,w}(x)$ and 2-adic valuations of integer sequences*.
- Teaching assistant for the undergraduate courses – Introduction to Probability and Statistics, Statistics for Scientists, Statistics for Business, Calculus - I, II and III.

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

Programming

Languages	**PYTHON** (NumPy, SciPy, *pandas*, **Matplotlib**, **scikit-learn**, sqlite3), **MATLAB**/Octave, C++
Miscellaneous	Mathematica, MS-Excel, LaTeX, Git

Projects

The effect of recession on the housing prices
Feb 2017

- Tested the hypothesis that university towns have their housing prices less affected by recessions as compared to other towns using the data obtained from the Zillow research, Bureau of Economic Analysis and wikipedia in different formats. Tools used: pandas for data manipulation and scipy.stats for testing.

Plotting record temperatures for New Orleans
Jan 2017

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

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

- 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. The project is uploaded on Github.

Huffman Coding and its Implementation
Spring 2010

- Implemented Huffman Coding, a lossless data compression algorithm, with data structures like trees and linked lists using object-oriented programming in C++. The code is shared on Github.