Ganesh Srinivas

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EDUCATION

SHIV NADAR UNIVERSITY
BTech Computer Science and Engineering
Greater Noida, India
August 2013 - May 2017 |
Cumulative GPA: 7.0 / 10.0

UDACITY MACHINE LEARNING NANODEGREE
Expected May 2017

LINKS

LinkedIn:// GaneshSrinivas
Github:// ganesh-srinivas
Bitbucket:// gs401

SOME COURSEWORK

ENGINEERING
Data Structures + Lab
Signals and Systems + Project
Operating Systems + Lab
Algorithm Design and Analysis + Lab
Organization and Architecture + Lab
Compiler Design + Lab
Databases + Lab
Computer Networks + Labs
Artificial Intelligence + Lab

THEORY
Discrete Mathematics
Single- and Multi-Variable Calculus
Probability and Statistics
Information Theory
Theory of Computation

SKILLS

PROGRAMMING
Very comfortable:
Python • C • Shell
Familiar:
Java • MySQL

TOOLS
gdb •git
Machine Learning:
Scikit-Learn • TensorFlow • Keras • PyTorch
Embedded:
Arduino • Processing
Network related:
Wireshark • OPNET • ns-2

EXPERIENCE

VIASAT | Software Development Intern
Jan 2017 - April 2017 | Chennai, India

ACM CHAPTER @ SHIV NADAR UNIVERSITY | President
Nov 2015 – Nov 2017 | Greater Noida, India

- Organized and taught tutorials (Basic Python, Unix command-line, Machine Learning, etc.), organized computer science research talks, competitive programming sessions and various other computer science outreach activities on campus.

TENREADS | Software Development Intern
May 2015 – July 2015 | Chennai, India

- Implemented a text categorization system based on a Naive Bayes Classifier.
- Co-wrote a script that buckets news articles and selects the best based on social ranking and other metrics. This was pushed to production.

PROJECTS AND RESEARCH

QUERY BY HUMMING PROBLEM IN MUSIC INFORMATION RETRIEVAL | June 2016 - April 2017 (Expected)
Undergraduate Research Project - Advisor: Dr. N Sukumar, Center for Informatics, Shiv Nadar University

- The initial approach was to extract a sequence of wavelet-transform coefficients from the hummed query audio signal and compare with database sequences using Levenshtein edit distance.
- Right now, I'm using deep learning to solve this. To deal with small datasets for my task, I'm doing transfer learning on the related task of cover song identification. The model is a deep convolutional network that learns embeddings from spectrograms. It uses a triplet loss function to learn these embeddings.

AUDIO FINGERPRINTING SYSTEM IN MATLAB | October 2014 - December 2017
Signals and Systems course

- We made a poor clone of Shazam, the song recognition app. Specifically, we implemented in Matlab the algorithm described in the paper, "An Industrial Strength Audio Search Algorithm" by Wang, et al. (2003). The technique involved hashing of Fourier spectrogram energy peaks of the recorded clip and comparing them against hashes in the audio database.

MACHINE LEARNING SUMMER INTERNSHIP | June 2014 - September 2014
| Shiv Nadar University, Greater Noida

- Worked under Dr. V. K. Jayaraman, Visiting Professor in the Center for Informatics.
- My work involved reading papers, mining datasets, preprocessing, writing and tweaking code.
- I implemented a feature selection algorithm called intelligent water drop (similar to ant colony optimization).