

# Ganesh Srinivas

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## EDUCATION

### SHIV NADAR UNIVERSITY

BTECH COMPUTER SCIENCE AND  
ENGINEERING

Greater Noida, India  
August 2013 - May 2017 |  
Cumulative GPA: 6.8 / 10.0

### UDACITY MACHINE LEARNING NANODEGREE

Expected Oct 2017

## 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

Informatics and Medicinal Chemistry +  
Lab  
Academic Writing

## SKILLS

### PROGRAMMING

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

### TOOLS

MOE • git • gdb  
Machine Learning:  
Scikit-Learn • Theano+Lasagne  
• TensorFlow • Keras  
Network related:  
Wireshark • OPNET • ns-2

## EXPERIENCE

### VIASAT | SOFTWARE ENGINEER

Jan 2017 - April 2017 (Internship), July 2017 - Present | Chennai, India

### GOOGLE SUMMER OF CODE - LAUGHTER CLASSIFICATION - AUDIO MACHINE LEARNING | MAY 2017 - AUGUST 2017

Red Hen Lab | Mentors: Michael Pacchioli, Vera Tobin

- Trained deep neural networks to detect laughter and categorize it (giggle, belly laugh, etc.)
- Visualize model weights and learned embedding space.

### PAPERS WE LOVE CHENNAI | FOUNDED IN MARCH 2017

A meetup group for reading and discussing important Computer Science papers

### ACM CHAPTER @ SHIV NADAR UNIVERSITY | PRESIDENT

Nov 2015 - Nov 2016 | Greater Noida, India

- Organized and taught tutorials (Python, bash, 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

- Worked on news classification based on Naive Bayes and Hidden Markov Models.
- Built a production system that buckets news articles and selects the best based on social ranking and other metrics.

## PROJECTS AND RESEARCH

### QUERY BY HUMMING PROBLEM - MUSIC INFORMATION RETRIEVAL | JUNE 2016 - APRIL 2017

Undergraduate Research Project - Advisor: Dr. N Sukumar, Center for Informatics, Shiv Nadar University

- A feedforward attention-based convolutional neural network was trained to produce embeddings for cover song recognition using a triplet-loss function. It was then used as a feature extractor for hummed queries and the nearest neighbors algorithm was used to retrieve the song name.

### SONG RECOGNITION (SHAZAM CLONE) - AUDIO FINGERPRINTING SYSTEM - MUSIC INFORMATION RETRIEVAL | OCTOBER 2014 - DECEMBER 2017

Signals and Systems course

- Implemented the algorithm described in the paper, "An Industrial Strength Audio Search Algorithm" by Wang, et al. (2003). The algorithm involved hashing of Fourier spectrogram energy peaks from the recorded clip and comparing them against hashes in the songs database.

### FEATURE SELECTION RESEARCH - MACHINE LEARNING | JUNE 2014 - SEPTEMBER 2014

Dr. V. K. Jayaraman, Center for Informatics | Shiv Nadar University, Greater Noida

- Implemented a feature selection algorithm called intelligent water drop (similar to ant colony optimization).