

# Siddharth Mittal

JUNIOR UNDERGRADUATE · COMPUTER SCIENCE AND ENGINEERING

Indian Institute of Technology (IIT), Kanpur

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## Education

### Indian Institute of Technology Kanpur

BACHELOR OF TECHNOLOGY, COMPUTER SCIENCE AND ENGINEERING

• Cumulative Grade Point Average: **9.4/10.0**

Kanpur, India

2015-2019 (Expected)

## Honors & Awards

2017	<b>Academic Excellence Award</b> , For exceptional academic performance for year 2015-16	IIT Kanpur
2015	<b>All India Rank 1510</b> , Joint Entrance Examination Mains, 1.5 million candidates	India
2015	<b>All India Rank 1988</b> , Joint Entrance Examination Advanced, 150,000 candidates	India
2015	<b>All India Rank 857</b> , Kishore Vaigyanik Protsahan Yojana	India
2015	<b>Selected for INSPIRE</b> , Department of Science and Technology	India

## Experience

### Indian Institute of Science

LEAP LAB, PROF. SRIRAM GANAPATHY [github.com/smittal6/leap-scd/](https://github.com/smittal6/leap-scd/)

- The goal was to develop a speaker independent, real time speaker change detection system
- Synthetic data set was created from TIMIT corpus
- Different models were proposed which used combinations of features and classifiers
- Experiments were carried out and reasonable accuracy was achieved on test set

Bengaluru, India

May-July 2017

## Projects

### Automatic Image Captioning

COURSE PROJECT, MACHINE LEARNING, PROF. PURUSHOTTAM KAR

[github.com/smittal6/keras-captioning](https://github.com/smittal6/keras-captioning)

- Implemented model for captioning the images based on Show and Tell paper
- We are experimenting with different architectures, and also with inclusion of attention model

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Aug 17 - Nov 17

### Smart Surveillance

UNDERGRADUATE PROJECT, PROF. MEDHA ATRE

- Aim was to detect anomaly based on feed from several surveillance cameras
- Obtained set of tags for a time frame using TensorFlow Object Detection API.
- Pools of tags are represented as vectors using GLOVE embeddings
- Score is calculated based on embeddings to detect anomaly

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### NachOS

COURSE PROJECT, OPERATING SYSTEMS, PROF. MAINAK CHAUDHARY

- Implemented syscalls for Fork, Exit, Exec, Sleep
- Implemented standard Unix process scheduling algorithms - FIFO, Round Robin, Shortest Job First and UNIX scheduling to assess their relative performances
- Implemented page replacement algorithms like Random Page Allocation, FIFO, LRU and LRU Clock

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## Extracurricular Activity

### Counselling Service

STUDENT GUIDE

- Personally helped 5 freshers adjust to the rigours of college life
- Assisted in conducting Orientation for more than 800 incoming students

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July 16 - Apr 17

### Programming Club

SECRETARY

- Assisted in organizing Freshers' Programming Contest in August '16
- Responsible for dissemination of information regarding summer projects offered by Programming Club

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Apr 16 - Apr 17

## Skills

<b>Programming</b>	C/C++, Java, Python, Keras, Tensorflow
<b>Web</b>	HTML, CSS (Bootstrap)
<b>Utilities</b>	Git, Vim, Shell Scripting, R, Matlab/Octave, $\LaTeX$

## Relevant Courses

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Introduction to Programming  
Abstract Algebra  
Data Structures and Algorithms  
Probability and Statistics (A\*)

Tools for Computing  
Discrete Mathematics  
Computer Organization  
Operating Systems\*

Linear Algebra & ODE  
Logic for CS  
Theory of Computation\*  
Intro to Machine Learning\*

*\*: Course in progress, A\*: For outstanding performance*