

# Mayank Saxena

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## EDUCATION

### DELHI TECHNOLOGICAL UNIVERSITY (FORMERLY DCE)

#### B.TECH IN MATHEMATICS AND COMPUTING

Expected May 2018 | New Delhi, India  
CGPA - 7.75 (Up to 6th semester)

## MOOCS

- Deep Learning by deeplearning.ai
- Machine Learning by Andrew NG
- Algorithms by Stanford University

## SKILLS

### TECHNICAL SKILLS

Programming Languages:

- Python • C • C++ • Java • MATLAB • MySQL •  $\text{\LaTeX}$  • Javascript • R

Frameworks:

- OpenCV • TensorFlow • Django • Numpy • Pandas • Flask • Android SDK

## AWARDS

- **Airvolution 2017** - Shortlisted for on site finals in Kuala Lumpur, Malaysia, as one of 20 teams all over the world. Organized by Air Asia.
- **MHacks 8** - Shortlisted and participated in international hackathon conducted in Detroit by University of Michigan.
- **TechnoVision 2017** - Recieved best research presentation award for research on Prediction of Like Count of YouTube video amongst 20+ presentations.
- **Digital India Hackathon 2016** - Finished third amongst 9000 entries. Developed a Facebook Messenger Bot : Rescue Bot - India.
- **IndiaHacks 2016** - An international hackathon organized by HackerEarth. Ranked amongst top 20 submissions in two tracks (FinTech and e-Commerce).
- **HackNSIT 2016** - Developed 'Foodify' and won 2nd Runners up prizes.

## COURSEWORK

- Discrete Mathematics • Stochastic Processes • Data Structures • Algorithms Design and Analysis • Graph Theory • Fuzzy Sets • OS • OOPS • Computer Vision • DBMS

## EXPERIENCE

### IBM INDIA RESEARCH LABORATORY | RESEARCH INTERN

Aug 2017 – Present | New Delhi, India

- Collected video data of trailers of all Bollywood Movies released between 2008-2017 and analyzed existence of gender stereotyping in them. The work was published on several leading websites.
- Worked under the guidance of Dr. Sameep Mehta and Nishtha Madaan.

### CARNEGIE MELLON UNIVERSITY | RI SUMMER SCHOLAR

June 2017 – September 2017 | Pittsburgh, PA

- Developed a real time model for prediction of behavior actions in RoboTutor using affective state estimation. RoboTutor is a finalist for the 15M \$ Global Learning XPrize Competition.
- Worked under the supervision of Dr. Jack Mostow.

### CUBE26 | SOFTWARE DEVELOPER INTERN

December 2015 – March 2016 | New Delhi, India

- Developed widget for frequent contacts as stock application for Karbonn Android Phones. All code was reviewed and pushed for production.
- Application and widget for finding out balance for prepaid connections.

## PUBLICATIONS

- [1] **M. Saxena**, R. Pillai, J. Mostow, 'Relating Children's Automatically Detected Facial Expressions to their Behavior in RoboTutor', *AAAI* 2018
- [2] N. Madaan, S. Mehta, , **M. Saxena**, A. Aggarwal, T. S Agrawaal, V. Malhotra, 'Analyzing Gender Stereotyping in Bollywood Movies', *FAT\** 2018
- [3] N. Madaan, S. Mehta, **M. Saxena**, A. Aggarwal, T. S Agrawaal, V. Malhotra, 'Bollywood Movie Corpus for Text, Images and Videos', *ArXiv*
- [4] **M. Saxena**, R. Pillai, J. Mostow, 'Student Behavior Analysis using Affective State Estimation in RoboTutor', *CMU RI Summer Scholars Journal*, 2017

## PROJECTS

### YOUTUBE LIKE COUNT PREDICTOR

Developed a Stochastic Gradient Descent Model to predict the like count of a given YouTube video. Project involved collection and cleaning of data, feature engineering, modelling and visualization of the data.

### DETECTING INFLUENTIAL NODES IN A GRAPH

Implemented my own algorithm - Extended Neighbourhood Coreness Centrality. Results were comparable and better in some cases to Pagerank, Degree centrality and k-core centrality algorithms.

### OFFLOW

Making data sharing possible through mobile devices without WiFi or mobile network using ultrasound waves. Developed under 36 hours at MHacks 8.

### FOODIFY

App processes image of a food item, retrieves nutritional content, tracks nutritional content and also suggests recipes based on daily calorie limit goal.