Mayank Saxena

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EDUCATION

COLUMBIA UNIVERSITY
Fu Foundation School of Engineering and Applied Science
MS in Computer Science
Dec 2019 | New York, NY

DELHI TECHNOLOGICAL UNIVERSITY (FORMERLY DCE)
B.Tech. in Mathematics and Computing
May 2018 | New Delhi, India
CGPA - 8.1/10

SKILLS

TECHNICAL SKILLS
Programming Languages:
• Python • C • C++ • Java • MATLAB
• MySQL • Javascript • R • LATEX
Frameworks:
• TensorFlow • Keras • OpenCV
• Numpy • Pandas • Android SDK

COURSEWORK

• Algorithms • Data Structures
• Operating Systems • Computer Vision
• Discrete Mathematics • Probability
• Linear Algebra • Optimization

OTHER COURSES

• Deep Learning by deeplearning.ai
• Machine Learning by Google
• Algorithms by Stanford University

AWARDS

• **TechnoVision 2017** - Recieved best research presentation award for research on Prediction of Like Count of YouTube video amongst 20+ presentations.
• **Digital India Hackathon 2016** - Ranked 3rd amongst 9000 entries. Developed a Facebook Messenger Bot.
• **IndiaHacks 2016** - An international hackathon organized by HackerEarth. Ranked amongst top 20 submissions in two tracks (FinTech and e-Commerce).
• **MHacks 8** - Shortlisted and participated in international hackathon conducted in Detroit by University of Michigan.
• **HackNSIT** - Received Runners up prize.

EXPERIENCE

IBM INDIA RESEARCH LABORATORY | Research Intern
September 2017 – January 2018 | 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 – August 2017 | Pittsburgh, PA

• Developed a real time prediction model for 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 based Regression 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
An application for data transfer between two Android devices using ultrasound waves. Authentication was accomplished using a time based OTP.

Foodify
Developed an Android App which processes image of a food item, recognizes the item, retrieves its nutritional content and also suggests its recipe.