

# Namrata Mukhija

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## Education

### Netaji Subhas Institute of Technology

B.E. INFORMATION TECHNOLOGY

Percentage: 78.85%, GPA: 8.635/10

Delhi, India

2014 - 2018

## Work Experience

### Software Engineer

MICROSOFT INDIA R&D

Noida, India

July 2018 - Present

- Successfully implemented a Distributed Data Structure to mitigate data inconsistency and data loss issues in Fluid Table. Developed Fluid Table de-serialization for enabling paste on Word, Excel, and PowerPoint apps.
- Implemented and shipped a re-architecture for PowerPoint Actions in the PowerPoint team with benefits of safe rollback and reliable undo support.
- Developed and shipped the [USD Performance Analyzer tool](#) and [USD 4.1](#) with Single Sign-On and caching features.
- **Awarded across 2500+ employees** in Experiences and Devices engineering group India - **E+D India Leadership Award** for generating energy in the team, demonstrating "All for One, One for All" mindset, and championing diversity and inclusion.

### Natural Language Processing Research Collaborator

MIDAS LAB, INDRAPRASTHA INSTITUTE OF INFORMATION TECHNOLOGY | ADVISOR: DR. RAJIV RATN SHAH | [GITHUB](#), [WEBSITE](#)

Delhi, India

September 2018 - February 2020

- Implemented topic segmentation and discourse analysis experiments to analyze the relationship between formality and virality of Reddit posts.
- Worked on abstractive summarization. Implemented a LSTM-based encoder architecture for learning the representation of keywords extracted using the TextRank algorithm for news articles. Implemented an attention-based pointer-generator network to produce summaries.

### Natural Language Processing Research Intern

ASPIRING MINDS | [GITHUB](#)

Gurgaon, India

Dec 2017 - Jan 2018

- Developed a BiLSTM model to automate grammar scoring on essays.
- Implemented augmented C&W word embeddings which would take into account the usage information of a word to treat grammatical errors as informative.
- This model replaced a third-party solution, and thereby, estimated a cost saving of around **\$12,000/year**.

### Software-defined Networks Research Intern

INDRAPRASTHA INSTITUTE OF INFORMATION TECHNOLOGY | ADVISOR: DR. VINAYAK NAIK

Delhi, India

Jun 2017 - Jul 2018

- Designed and implemented a centralised algorithm for load balancing in server farms.
- Developed using Mininet and Ryu controller REST APIs in Python.

## Publications

- Chakraborty P\*, Arora U\*, **Mukhija N.** et al. (2019), OSAVA: An Android app to visualize and teach algorithms used in operating systems. JEET, [doi:10.16920/jeet/2019/v33i4/145517](https://doi.org/10.16920/jeet/2019/v33i4/145517)

## Leadership Experience

### NLP Research Lead

NLP GROUP, NSIT

Delhi, India

Aug 2017 - Jan 2018

- Led a team of 2 undergraduates and implemented sarcasm detection achieving an f-score 0.75.

### Core Team Member & NLP Speaker

WOMEN IN MACHINE LEARNING & DS, DELHI | [LINKEDIN](#)

India

Sep 2018 - Present

- Organized a national-level machine learning conference to connect women in ML with industry ML projects, speakers from IBM Research and TCS Research.
- Speaker at 'Deep Dive into NLP' on training encoder-decoder architectures and beam search decoding. Slides [here](#).

### AI Ambassador

WOMEN IN AI | [WEBSITE](#)

India

Sep 2019 - Present

- Organized a virtual global-scale Summit which saw participation of 40+ countries, 160+ women speakers, and 4000+ attendees to encourage and facilitate women participation in AI field.
- Invited as a panelist by Swiss Embassy, Delhi to speak on Women in AI and technology in India and Switzerland.

## Mentor

LEARN IT, GIRL!

Delhi, India

Oct 2017 - Dec 2017

- Mentored a student through the development of a Google Maps Chatbot developed using Python which she deployed on Facebook.
- She wrote a [blog](#) post with the implementation details.

## Vice President

FINANCE & ECONOMICS SOCIETY OF NSIT

Delhi, India

Aug 2016 - Jul 2017

- Organized weekly meets and managed the society by initiating newer ways of spreading finance and economics awareness like SIGs and case study competitions.
- Led a team of 120+ students for organizing Consilium - The NSIT Business Conclave. Witnessing participation of 500+ students.

## Director Community Services

ROTARACT REGENCY OF NSIT

Delhi, India

Aug 2016 - Jul 2017

- Co-organized shelter home visits, and orphanage meets contributing to NGOs Jaagriti and Masoom Duniya.

## NSIT Developer Student Club Lead

GOOGLE DEVELOPER STUDENT CLUB, NSIT | [WEBSITE](#), [GITHUB](#)

Delhi, India

Jan 2018 - Jan 2019

- Spearheaded Google's initiative to equip NSIT students with mobile development skills by developing solutions for startups and non-profits.
- Organized multiple Android hands-on workshops & multiple projects were developed by students applying learning from these workshops.

## Projects

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### Sarcasm Detection

NLP GROUP, NSIT | [GITHUB](#)

Delhi, India

Aug 2017 - Jan 2018

- Implemented sarcasm detection using lexical, pragmatic, lexical incongruity and context incongruity features. **f-score 0.75**.

### Traffic Sign Classification

ADVISOR: DR. DEEPIKA KUKREJA | [GITHUB](#)

- Developed and trained a Convolutional Neural Network model on LISA Traffic Sign Dataset in Keras for classifying 47 different types of road signs. **Accuracy: 97.75%**.

### OSAVA

ADVISOR: DR. PINAKI CHAKRABORTY | [GITHUB](#)

- A desktop/android app for visualizing various operating system algorithms - developed using Kivy framework and Python.

## Interests and Scholarships

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### HackIt Girls IGDTUW 2016

WINNER

Delhi, India

Developed a MOOC look-up app to aid students in searching across MOOC sites for the best course.

### Competitive Coding

SOLVED 200+ PROBLEMS ON SPOJ AND HACKEREARTH

### Scholarships

- 2017 Grace Hopper Conference, India
- 2014 INSPIRE - Higher Education

## Skills

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### Programming Languages

C, C++, C#, TypeScript, JavaScript, Python

### Operating Systems

Linux (Ubuntu), Windows

### Deep Learning Frameworks

Keras, Tensorflow, PyTorch

### Other

Git, OpenCV, NumPy, React, Node.js, pandas