

Namrata Mukhija

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Education

Courant School of Mathematical Sciences, New York University

M.S. COMPUTER SCIENCE

Starting as a **full-time student** in Spring 2021.

New York, USA

Starting Jan 2021

Netaji Subhas Institute of Technology

B.E. INFORMATION TECHNOLOGY

Percentage: 78.85%, CGPA: 8.635/10

Delhi, India

2014 - 2018

Work Experience

Software Engineer II

MICROSOFT INDIA R&D

- 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.

Noida, India

July 2018 - Dec 2020

Natural Language Processing Research Collaborator

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

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 text 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.

Delhi, India

Natural Language Processing Research Intern

ASPIRING MINDS | [CODE](#)

- 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**.

Gurgaon, India

Dec 2017 - Jan 2018

Software-defined Networks Research Intern

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

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

Delhi, India

Jun 2017 - Jul 2017

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/v32i4/145517](https://doi.org/10.16920/jeet/2019/v32i4/145517)

Projects

Sarcasm Detection

NLP GROUP, NSIT | [CODE](#)

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

Delhi, India

Aug 2017 - Jan 2018

Traffic Sign Classification

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

- 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 | [CODE](#)

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

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](#), [CODE](#)

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.

Interests and Scholarships

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

Programming Languages	Python, C, C++, C#, TypeScript, JavaScript, SQL
Operating Systems	Linux (Ubuntu), Windows
Deep Learning Frameworks	Keras, Tensorflow, PyTorch
Other	Git, OpenCV, NumPy, React, Node.js, pandas