# Apratim Shrivsatav

Kathmandu, Nepal

apratimshrivastav.me | linkedin.com/in/apratimshrivastav | github.com/apratimx

## EDUCATION

**Delhi Technological University**                                                   Delhi, India

*B.Tech in Computer Engineering*                                        *2019-2023 (Expected)*

- GPA: 9.56 (most recent semester - 98 percentile)
- Recipient of Government of India Scholarship for B.Tech in Engineering 2019 (4 years)

## EXPERIENCE

**Samsung Innovation Campus, Delhi**                              August 2021 – Present

*ML Research Intern*                                                           *New Delhi, India*

- Leading a team of four to develop and deploy an optimised algorithm for gait analysis & step estimation for future Samsung wearable devices
- Developed a novel method utilising mathematical modelling and signal processing techniques to reach an accuracy of 99.99% on step estimation on collected dataset.
- Implemented several complex SotA ML models for baseline comparison against our method reaching 90% accuracy on all of them.

**Polemix, NYC**                                                          April 2021 – August 2021

*Data Science Intern*                                                              *New York, USA*

- Helped build the data-science division at the social media startup by setting up the data pipeline architecture for inflow of data into the models.
- Built Regression and Support Vector Machine(SVM) models for sentiment analysis to track early user engagement with the platform.
- Built programs for visualising engagement on the platform allowing for better decision making for the company. playing a key-role in user growth from 1000 users to almost 10,000 in five months.

## PUBLICATIONS

**Shrivastav A.** , Jain T. , Kucchal U. , Singhal S. , Dr. Sethia D. , Chaudhary V. ,Nigam R. ,Namedo A.
"AN OPTIMISED ALGORITHM FOR STEP COUNT ESTIMATION USING SENSOR DATA FROM SMARTPHONES AND WEARABLES", 2021
*Under review at IEEE TenSymp 2022 (IIT Bombay, India)*

**Shrivastav A.** , Subedi A.
"IDENTIFICATION OF CORONAVIRUS IN TRANSMISSION ELECTRON MICROSCOPE IMAGERY USING MACHINE LEARNING APPROACH", 2021
*To be published in the next edition of proceeds from 2021 International Symposium on Computer Vision and Machine Intelligence in Medical Image Analysis (ISCMM)(Springer, Scopus Indexed)*

Singha A.* , **Shrivastav A.***
"METAVERSE: EXPLORING & REGULATING THE FUTURE OF HUMAN INTERACTION", 2021
*To be published in the next edition of Indian Journal of Law & Technology 2022, volume 16 (Highest ranked 'Law & Tech Journal in India)*

*\* indicates equal contribution*

## AWARDS AND ACHIEVEMENTS

- Recipient of Government of India Scholarship for B.Tech in Engineering '19 (based on academic merit) - 4 years
- Amazon AWS Machine Learning Scholar '21 by AWS and Udacity (<10% acceptance rate)
- Government of India merit certification for academic excellence '16
- Officially ranked 8th best in Asia, Asian Debating Championship (ABP) 2021, Malaysia.

- World Top 25, World Universities Debating Championship (WUDC) 2021, Korea.
- Invited Judge, Harvard University, USA (Harvard WS Invitational '21 by Harvard College Debate Union)
- Invited Judge, Oxford University, UK (Oxford University IV '21 by Oxford Union)

## PROJECTS [1]

### Topic Modelling of BBC News Articles through Non-negative matrix factorisation
*Custom scraped BBC articles | SKLearn*
- ∗ Built an unsupervised text classification system that gives out specific articles based on required themes
- ∗ The program uses non-matrix factorization with SKLearn to model topics.
- ∗ A custom dataset was created through a custom built scraper and deployed on the BBC News website.

### Fake News Detector
*Python | Deep Learning - LSTM*
- ∗ The program utilizes onehot encoding and LSTM model for the detection
- ∗ Allows the ability to observe the alteration in shape, and observe the mathematical verification of the total weight matrix size of the LSTM.

### Question - Answer System
*SQuAD Dataset | Model trained using Albert | Hugging face library adjusted to make predictions*
- ∗ Built an unsupervised text classification system that gives out specific articles based on required themes
- ∗ The program uses non-matrix factorization with SkLearn to model topics.
- ∗ A custom dataset was created through a custom built scraper and deployed on the BBC News website.

### ASL Sign translation system
*MS-ASL Datatset (20000+ ASL images) - custom labelled | Tensorflow*
- ∗ Built a custom ASL translation system based on the MS ASL Dataset
- ∗ Used Tensorflow to build and train model
- ∗ Built a model with a mean average precision of 98.5%

## TECHNICAL STRENGTHS

**Programming** C, C++, Python
**Familiar-with** HTML, CSS, JS, LaTeX
**Frameworks** MATLAB, PyTorch, Keras, Tensorflow, OpenCV, SKLearn, SQL, Oracle, Flask

## POSITIONS AND RESPONSIBILITIES

### Nepalese National Debate Team 2021
*Head Coach & Chief selector*
- · Coached the team to its first Asian Championship Title in 2021 (Asian Schools Debating Championship - Malaysia). Past record - Never having moved past group stages.
- · Coached the team to 35th Rank in the world in a year with the highest ever attendance (World Schools Debate Championship - Macau, 2021: 75+ Countries)
- · Got Nepal promoted to a B-tier debating nation based on performances globally. (Previous D-tier)

### Indian National Debate Team 2022                                                    May 2021 - Present
*Co-Coach*
- · Indian National Debate Team is one the most successful debate teams in the world. Having, most recently, been crowned world champions in 2019.I'll be working with the Indian national debate team for their world championship run for 2022 world championship.

### Asian Debating Council                                                              April 2021 - Present
*Vice President*
- · First ever debater from Nepal to be elected at an executive position at the Asian Debating Council. (Voted in by 100+ universities across Asia.)

---