# AATIF NISAR DAR

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LinkedIn , Medium , GitHub

## ACADEMIC QUALIFICATIONS

**South Asian University** *2020 - 2022*
MSc Computer Science SGPA: 7.87/9.0
Relevant Courses: Mathematical Topics on Computer Science, Artificial Intelligence, Data Mining, Machine Learning, Linear Programming, Advanced Data Structures & Algorithms.

**University of Delhi** *2017 - 2020*
BSc (Hons.) Computer Science CGPA: 7.77/10.0

**Boys Higher Secondary, Sopore.** *2016 - 2017*
Class XII Percent: 94%

**Nether Field School, Sopore.** *2014 - 2016*
Class X CAGP: 9.0/10.0

## EXPERIENCE

**Project Scientist**, IIT (Indian Institute of Technology), Delhi. *Jun '22 - Present*

- Working with Prof. Chetan Arora and Prof. Nandana Sengupta at Indian Institute of Technology, Delhi on the project "Enhancing India's Science, Technology and Innovation Policy Analysis Capabilities".
- Investigating possibilities of automated estimation of household level economic variable – income and assets, typically measured using a detailed household survey.
- Utilizing Transfer Learning techniques, specifically using Vision Transformers, and Metric Learning techniques to analyze images from four North-east states of India for the purpose of predicting household income.

**Internships:**

- Prevent Gun and Gang Violence, **Omdena-Iraq Local Chapter** *Sept '21 - Oct '21*
- Business and Data Analytics, **The Sparks Foundation** *Aug '21 - Sep '21*
- Big Data and ML, **Rani.ai** *Aug '21 - Oct '21*

## PUBLICATIONS

(Working Paper) "Economic Status Prediction Using Deep Learning on Household Images" (with Chetan Arora and Nandana Sengupta).

(Selected Paper) "MLGAN: Addressing Imbalance in Multilabel Learning Using Generative Adversarial Networks," ICETCI 2023 (with Reshma Rastogi).

(Lightly Peer-reviewed) Aatif Nisar Dar, "Principal Component Analysis" Global Scientific Journal. GSJ: Volume 9, Issue 7, July 2021, Online: ISSN 2320-9186.

**Articles:**

- "How to Choose the Best Classification Model", Medium.
- "Partial Multi-Label GANs", Medium.
- "Image-To-Image Translation via Generative Adversarial Networks (GANs)", Medium.

## ACADEMIC PROJECTS

**(Master's Dissertation) Generative Adversarial Networks and its Applications**, South Asian University. *2021 - 2022*

- Executed GAN on MNIST Digit dataset and MNIST Fashion dataset with Self Attention Module and Spectral Normalization in both Generator and Discriminator. Added TTUR (Two Time Scale Update) to stabilize the training of the GAN.
- Implemented CycleGAN, Pix2PixGAN, StyleGAN, SMIT, and AttentionGAN on CelebA dataset.
- Outcome of my dissertation was a novel architecture called MLGAN (Multi-Label Generative Adversarial Network), which was designed to address the challenge of data imbalance in multilabel datasets.

**PHP**, Designed a website 'Learn PHP' for my semester project using HTML, CSS, and PHP with Apache as the webserver. *2019*

**Software Engineering Project**, Developed an online web-based tuition platform where students get help in finding suitable teachers to study a particular subject. *2019*

**Android Studio**, Created an online attendance apk using Android Studio where teacher enters student details at once and marks student either present or absent. *2018*

## ACCOMPLISHMENTS AND ACTIVITIES

Second position at Hackathon organized by Department of Computer Science, Ramanujan College, University of Delhi.

Second position for Essay Writing Competition on the topic 'No Voter to be Left Behind'.

Students Union Representative at Computer Science Department of Keshav Mahavidyalaya, University of Delhi.

Secretary at National Service Scheme NSS.

Attended Ethical Hacking Workshop at Delhi Technological University DTU.

## SKILLS

**Proficient in:**
Python, Computer Vision, Generative Adversarial Networks GANs (Master's Thesis), Natural Language Processing, C++, Machine Learning, Neural Networks, Data structures and Algorithms, Data mining, Linux, and Latex.

**Familiar with:**
Matlab, R, Java, Big Data (PySpark), PHP, HTML, CSS, and JavaScript.