

AATIF NISAR DAR

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[Webpage](#) , [LinkedIn](#) , [Medium](#) , [GitHub](#)

RESEARCH INTERESTS

Computer Vision, AI for Social Impact, Medical Image Analysis, Image Generation and Synthesis, Multimodality, and 3D Computer Vision.

EDUCATION

Master of Science in Computer Science

2020 - 2022

South Asian University, New Delhi, India

CGPA: 7.87/9.0

Relevant Courses: Mathematical Topics on Computer Science, Artificial Intelligence, Data Mining, Machine Learning, Linear Programming, Advanced Data Structures & Algorithms.

Bachelor of Science (Honours) in Computer Science

2017 - 2020

University of Delhi, New Delhi, India

CGPA: 7.77/10.0

RESEARCH EXPERIENCE

Project Scientist, IIT (Indian Institute of Technology), Delhi.

Jun '22 - Present

(Prof. Chetan Arora and Prof. Nandana Sengupta)

- Working on the project “Enhancing India’s Science, Technology, and Innovation Policy Analysis Capabilities” in the Vision Lab at the Indian Institute of Technology, Delhi.
- 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.

(Master’s Dissertation) Generative Adversarial Networks and its Applications, South Asian University.

May '21 - May '22

(Prof. Reshma Rastogi)

- 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 the 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.

PUBLICATIONS

“Economic status prediction using deep learning on household images,” with Prof. Chetan Arora and Prof. Nandana Sengupta. (Working Paper)

Aatif Nisar Dar, Reshma Rastogi, “MLGAN: Addressing imbalance in multilabel learning using generative adversarial networks,” [ICETCI 2023](#). (To Appear)

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

OTHER WRITINGS

Aatif Nisar Dar, “How to Choose the Best Classification Model,” [Medium](#), Oct '22.

Aatif Nisar Dar, “Partial Multi-Label GANs,” [Medium](#), Oct '21.

Aatif Nisar Dar, “Image-To-Image Translation via Generative Adversarial Networks (GANs),” [Medium](#), Dec '21.

INDUSTRY EXPERIENCE

Omdena-Iraq Local Chapter *Sept '21 - Oct '21*

- Prevent Gun and Gang Violence Internship

The Sparks Foundation *Aug '21 - Sep '21*

- Business and Data Analytics Internship

Rani.ai *Aug '21 - Oct '21*

- Big Data and ML Internship

AWARDS AND HONORS

Second position at Hackathon organized by Department of Computer Science, Ramanujan College, University of Delhi. *Feb '20*

Second position for Essay Writing Competition on the topic ‘No Voter to be Left Behind,’ Chief Electoral Officer. *May '18*

LEADERSHIP ACTIVITIES

Students Union Representative at Computer Science Department of Keshav Mahavidyalaya, University of Delhi. *Sept '18 - Sept '19*

Secretary at National Service Scheme NSS. *Aug '17 - Aug '19*

Attended Ethical Hacking Workshop at DTU (Delhi Technological University). *Feb '18*

Engaged in MUN (Model United Nations) activities at Jamia Milia University. *Oct '18*

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.