

AATIF NISAR DAR

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[aatifnisar01.github.io](https://github.com/aatifnisar01), [LinkedIn](#), [Medium](#), [GitHub](#), [Google Scholar](#)

RESEARCH INTERESTS

ICTD (Information Communications Technology for Development), HCI (Human Computer Interaction), Social Computing, and FATE (fairness, accountability, transparency, and ethics).

ACADEMIC QUALIFICATIONS

Master of Science in Computer Science

2020 - 2022

South Asian University, New Delhi, India

CGPA: 7.87/9.0 (Second Rank)

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: 7.70/10.0

EXPERIENCE

Research Experience

Research Associate, IIT (Indian Institute of Technology), Delhi.

Jan '24 - Present

(Prof. Aaditeshwar Seth)

- Tracking Socio-economic Development in Rural India Using Satellite Imagery
- Identification of water bodies and plantations from Google Maps.

Project Scientist, IIT Delhi.

Jun '22 - Nov '23

(Prof. Chetan Arora and Prof. Nandana Sengupta)

- Worked on the project “Enhancing India’s Science, Technology, and Innovation Policy Analysis Capabilities” in the Vision Lab at the Indian Institute of Technology, Delhi.
- Investigated possibilities of automated estimation of household level economic variable – income and assets, typically measured using a detailed household survey.

(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.

Industry Experience

Prevent Gun and Gang Violence Internship, **Omdena-Iraq Local Chapter**,

Sept '21 - Oct '21

Business and Data Analytics Internship, **The Sparks Foundation**

Aug '21 - Sep '21

Big Data and ML Internship, **Rani.ai**

Aug '21 - Oct '21

PUBLICATIONS

Research Papers

Aatif Nisar Dar, Nandana Sengupta, Chetan Arora. "Assessing the Feasibility and Ethics of Economic Status Prediction using Deep Learning on Household Images." ACM Journal on Computing and Sustainable Societies (2024).

Aatif Nisar Dar and Reshma Rastogi, 2023. "MLGAN: Addressing Imbalance in Multilabel Learning Using Generative Adversarial Networks," In Proceedings of IEEE International Conference on Emerging Techniques in Computational Intelligence (ICETCI), Hyderabad, India, 2023, pp. 324-331. **Best Presenter Award**

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

Posters/Workshops/Symposiums

Aatif Nisar Dar, Badrinath Padmanabhan, Mrunal Atul Kadane, Aaditeshwar Seth. "Using satellite images to track relative socio-economic development in rural India". **Poster** presented at ACM COMPASS '24, India.

Research Week with Google 2024. (Funded travel) 1-3 Feb '24

Symposium on Machine Learning, IIT - Bombay. (Funded travel) 21-23 Dec '23

Online Articles

Aatif Nisar Dar. "How to Choose the Best Classification Model," "Partial Multi-Label GANs," and "Image-To-Image Translation via Generative Adversarial Networks (GANs)," [Medium](#).

ACHIEVEMENTS AND VOLUNTARY EXPERIENCE

Voluntary Organizer at ACM COMPASS '24, New Delhi - India. 08-11 July '24

Best Presenter Award at the ICETCI 2023 conference for the paper entitled "MLGAN: Addressing Imbalance in Multilabel Learning Using Generative Adversarial Networks." 21-23 Sept '23

Member of AISCF (AI Safety Careers Fellowship), enhancing understanding of AI systems and safety measures. Aug-Oct '23

Second position at Hackathon organized by the 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

PROFESSIONAL SERVICES

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

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

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

Engaged in MUN (Model United Nations) activities at Jamia Millia Islamia 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:

Google Earth Engine, QGIS, Matlab, R, Java, Big Data (PySpark), PHP, HTML, CSS, and JavaScript.