Abhijit Adhikary

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Education

- **The Australian National University** — Canberra, ACT, Australia
  Master of Machine Learning and Computer Vision; GPA: 7.00/7.00 — *02/2020 – Present*
- **Australian Centre for Robotic Vision** — Canberra, ACT, Australia
  ACRV Robotic Vision Summer School 2021; Best performing group in Adelaide Node — *02/2021 – 02/2021*
- **Middlesex University** — London, UK
  Bachelor of Computer Science; First Class Honours (Distinction) — *09/2017 – 06/2019*
- **North South University** — Dhaka, Bangladesh
  Bachelor of Computer Science & Engineering; Incomplete (Transferred to Middlesex University) — *01/2015 – 05/2017*

Work Experience

- **The Australian National University** — Canberra, ACT, Australia
  Casual Sessional Academic (Tutor) — *01/2021 - Present*
  - **Role**: Conduct tutorial sessions and responsible for the complete grading process of a course.
  - **Supervised Courses**: **i)** Neural Networks, Deep Learning and Bio-inspired Computing, **ii)** Computer Networks, **iii)** Software Engineering, **iv)** Introduction to Machine Learning
- **Middlesex University** — London, UK
  Student Learning Assistant (Tutor) — *10/2018 - 05/2019*
  - **Role**: Work in lectures, seminars, workshops and small group sessions to assist students and facilitate their learning.
  - **Supervised Modules**: **i)** Web Application and Databases, **ii)** Distributed Systems and Networking

Publications

- Abhijit Adhikary, Namas Bhandari, Evan Markou and Siddharth Sachan. ArtGAN - Artwork Restoration Using Generative Adversarial Networks. In *2021 13th International Conference on Advanced Computational Intelligence (ICACI)*, pages 199-206, 2021
- Abhijit Adhikary and Namas Bhandari. PosEmotion - Combining Real-Time 2D Body Pose Estimation and Facial Emotion Recognition to Analyze Human Behavior. In *2021 26th International Conference on Automation and Computing (ICAĆ21)* [In Press]

Reviewer

- **ICAC 2021**: 26th IEEE International Conference on Automation and Computing

Significant Projects

- **Privacy of Biometrics using Generative Adversarial Networks (GAN)**: For my masters research project I am training a Conditional-GAN to filter out selective data i.e. identity, disease information etc. from EEG data. The raw EEG data is first preprocessed and converted to a special RGB image to facilitate CNN training. Although the project is in an intermediate stage, the results are already very promising.
- **Image to Image Translation Using Cycle Consistent Generative Adversarial Network (Cycle-GAN)**: For my Honours research project I analysed the importance of various losses, i.e. cycle-consistency, identity etc. for Cycle-GAN training in the domain of unsupervised image style transfer.
- **Analysis of Network Pruning with Variable Finetuned Layers on a Pretrained AlexNet Model**: Although a pretrained neural network provides a better starting point in most cases, choosing the number of layers to fine tune is a challenge, specially when the dataset is small. I observed the role of fine tuning different number of pretrained layers of the AlexNet model and concludes the ideal number of layers for small datasets.
- **Analysis of Street Image Segmentation Performance using Spectral Clustering via Nyström Approximation**: I analysed the speed and segmentation quality of the Nyström approximation to perform spectral clustering on the IDD20k dataset, containing vehicle dashcam image sequences, and compared it with SOTA algorithms.

Technical Skills

- **Programming Languages**: Python, Java, C, C++, MATLAB **Typesetting**: LaTex
- **Deep Learning Frameworks**: PyTorch, TensorFlow **Version Control**: Git, Github, Gitlab
- **Other Relevant Tools**: OpenCV, NumPy, Matplotlib, Pandas, Scikit-learn

Certificates & Specializations

- **Deep Learning Specialization** , Coursera (deeplearning.AI)
- **Generative Adversarial Networks (GANs) Specialization** , Coursera (deeplearning.AI)
- **Data Science Professional Certificate** , Coursera (IBM)
- **Applied Data Science Specialization** , Coursera (IBM)
- **Mathematics for Machine Learning Specialization** , Coursera (Imperial College London)

Achievements

- **Junior Scholarship 2009** (National), Bangladesh
- **2nd Place**: 32nd National Science & Information Technology Fair 2011, Bangladesh

Voluntary Experience

- **Coursera** coursera.org
  Beta Tester *05/2021 - Present*
- **Middlesex University Students' Union** London, UK
  Student Voice Leader *10/2017 - 05/2018*
- **NSU ACM Student Chapter, NSU Art & Photography Club** Dhaka, Bangladesh
  Sub-Executive Body Member *2016 - 2017*

References

Available upon request.