Akansha Mukherjee

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Education

Jadavpur University *Kolkata, India*

4th year, Bachelor in Electronics and Telecommunication Engineering *Aug. 2019 - Present*

- Cumulative GPA of 9.755/10 (first to sixth semester).
- Relevant courses taken include Mathematics I and II, Basic Electrical Engineering, Data Structures and Algorithms (in C), Control Engineering, Pattern Recognition, System Software.
- Currently holds a class rank of One in a class of 93 students.

Technical Skills

Programming Languages	Java, C, Python, MATLAB, Octave.
Python Frameworks and Libraries	Pytorch , Tensorflow, Pandas, NumPy.
Others	LaTex, Multisim.

Experience

AI Lab, Jadavpur University *Kolkata, India*

Research Scholar under Prof. Amit Konar *Nov. 2021 - Present*

- Software implementation of a feature selection algorithm for detection of examples in test set that do not belong to the ”known” classes that the model has been trained on.
- Developing a mathematical model for constrained machine learning optimization tasks.

SISIR Radar Pvt. Ltd. *Kolkata, India*

Research Intern under Mr. Tapan Mishra retired director of ISRO *May 2022-July 2022*

- Implementation of random number generators and random choice functions.
- Implemented Simulated Annealing based Speckle Filtering for SAR images with speed-up using vectorization.
- Implemented novel SAR image Depeckling Algorithm with faster convergence for real-time image processing.
- Developed software implementation of Block Adaptive Quantization (2 to 6 bit quantization) for on-board data compression.

CSRE, IIT Bombay *Mumbai, India*

Research Intern under Prof. Biplab Banerjee *Nov. 2021 - Feb. 2022*

- Implemented a novel regularization technique ”Dilated Dropblock” (DDB) for deeply supervised U-Net for Single Image Super Resolution.
- Obtained improvement in image quality (PSNR, SSIM) for Deeply Supervised U-Net with DDB regulariser.

VIPLAB, IIT Kharagpur *Kharagpur, India*

Summer (2021) Research Intern *May. 2021 - Jul. 2021*

- Worked under Prof. Jayanta Mukhopadhyay as a Machine Learning Intern on Unsupervised Data Augmentation to Generate Balanced training sets .
- Obtained improved testing NMI (0.81) for balanced dataset, as opposed to skewed binary dataset (0.78) for Wisconsin Breast Cancer Dataset.

Open Online Courses

Deep Learning Specialization *Coursera*

Completed the course with 100% grade *May. 2020 - Present*

- Neural Networks, Deeplearning, CNNs.
- Hyperparameter tuning, regularization and optimization techniques.

AI for Medical Diagnosis *Coursera*

Completed the course with 100% grade *Aug. 2020 - Present*

- Image segmentation, model evaluation and multi-class classification for diagnosis of diseases.

AI for Medical Prognosis *Coursera*

Completed the course with 100% grade *Aug. 2020 - Present*

- Application of tree-based models to predict patient survival rates.