



Machine Learning Lab

DEPARTMENT OF ELECTRONICS & COMMUNICATIONS ENGINEERING

Coordinator: Dr. Richa Gupta

Location: Aryabhata Bhawan II, Third Floor, Sector 62 Campus

Objective

The machine learning lab in the ECE department aims to establish a sustainable research group that encourages the scope of interdisciplinary collaboration and trains the next generation of machine learning engineers. Research Scholars in the machine learning lab are working in the following areas:

- (i) Medical image processing using GANs and basic machine learning models.
- (ii) Text detection and recognition for the Devanagari script using convolutional neural network (CNN)
- (iii) Video forgery detection (DeepFakes, FaceSwap and Face2Face) using deep learning techniques
- (iv) Object based forgery detection
- (v) Median filtering forensics
- (vi) Copy-move forgery detection

Hardware/Software Availability

Details of Hardware available:	
Details of Server (1)	Intel (R) Xeon (R) CPU ES-2687W v3 @ 3.10 GHz X 16, 64GiB, 1 TB HDD, 64-bit OS (1 node), NVIDIA Quadro K620 GPU
Details of Nodes (5)	Intel Core i7-4770 (3.40 GHz Octa-Core) processor, Graphics AMD Radeon HD 8570 2GB, 8GB DDR3-1600MHz, 1 TB HDD, 64-bit OS, NVIDIA Quadro K420GPU
Details of Nodes (3)	Intel Xeon Processor W-2223 (4C, 3.6GHz 3.9GHz Turbo HT 8.25MB (120W)), 16GB DDR4-2666, 1 TB HDD, 64bit OS, Nvidia Geforce RTX2080Ti
Details of Software available:	
MATLAB 2016 a	Parallel Computing Toolbox, Symbolic Math Toolbox, Signal Processing Toolbox
Theano 0.9.0, Python 3.5, Anaconda 4.2.0, Caffe 1.0, Spark 2.1.0, Hadoop 2.7.4	

Glimpses of the Venue

