Utkarsh Verma

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Education

B.Tech. (E&C)	2015-2019	Delhi Technological University	7.78 CGPA
AISSCE (Class XII)	2014	Kendriya Vidyalaya, Allahabad	89.4%
AISSE (Class X)	2012	Sanskaar International School, Alld.	9.2 CGPA

Skills

Programming Languages C/C++, Python, MATLAB, SQL, Node.js (familiar)
Python Libraries TensorFlow, TFLearn, Keras, OpenCV, Scikit-Learn
Software & Tools Jupyter Notebooks, Anaconda, Docker, Git, VSCode, Octave

Internship

CSIR-CEERI, Pilani, Rajasthan Jun – July 2018

Position: *Research Trainee*

Guide(s): ***Prof Santanu Chaudhury, ex-Director, CSIR-CEERI*** *and* ***Dr S. A. Akbar, Chief Scientist, CSIR-CEERI***

Implemented the state-of-the-art deep neural network architecture for Super-resolution and Enhancement of Images and trained it on a dataset of 800 high-resolution images.
Developed an end-to-end architecture for document image Super-resolution, denoising and artifacts removal for optimum performance and robustness.
Identified the shortcomings in conventional super-resolution techniques which improve the Peak Signal-to-Noise Ratio only and researched for metrics to state a perceptually super-resolved image.

Projects

Image super-resolution with Perceptual Quality Retention Jun – July 2018

Built a Deep Neural Network with modified loss function and architecture in order to keep the perceptual quality of the image intact along with improving the peak signal to noise ratio (PSNR).

Human Activity Recognition in Videos Jun – July 2018

Developed a deep neural net end-to-end pipeline to capture data in compressed form and trained the model to detect 101 labelled activities of UCF-101 dataset. The architecture used with compressive sensing pipeline was CNN-LSTM.

Vector – An Amazon Alexa Skill Jun 2017

Developed a daily commute assistant skill for Amazon Alexa which answered FAQs related to DTC bus travel.

Computer Vision based Pick-Up Bot Nov 2016 - Mar 2017

Built a Computer Vision based Automated Assembly on a Firebird-V bot which was programmed to pick objects that could be differentiated by colour and shape and deliver them to their corresponding destination signified by the same shape and colour.

Awards and Accolades

13th Position, ECCV-PIRM Challenge, ECCV 2018 Aug 2018
Perceptual Quality Aware Image Super-resolution using Deep Backpropagation Network

1st Runner Up, Smart India Hackathon 2018 Apr 2018
World's Largest Hackathon - 1L+ Participants

2nd Runner Up, Fintech Innovation Hackathon Sep 2017
DCB Bank

Finalist, E-Yantra Robotics Competition Mar 2017
IIT Bombay

Relevant MOOCs Taken:

Convolutional Neural Networks for Visual Recognition (CS231n)	**Stanford University**
5-course specialisation in Deep Learning	**Deeplearning.ai**
Machine Learning Specialisation	**University of Washington**
Advanced Python for Machine Learning (DSE200x)	**UCSanDiego**