

Education	Stony Brook University, New York <i>Aug 2017 - May 2019</i> M. S. in Computer Science, 3.64/4.0 Courses : Computer Vision, Machine Learning, Artificial Intelligence, Natural Language Processing, Network Security, Analysis of Algorithms
	Indian Institute of Technology (BHU), Varanasi <i>2011 - 2015</i> B. Tech. (with Hons.) in Electronics Engineering
Interests & Skills	Interests : Computer Vision, Deep Learning, Human Computer Interaction Languages : Python, C++, C, SQL, Java, HiveQL (<i>in order of proficiency</i>) Softwares, Libraries : PyTorch, Tensorflow, OpenCV, Octave, MATLAB.
Work Experience	Computer Vision Intern, Trademark Vision <i>Jun - Aug, 2018</i> <ul style="list-style-type: none">• Worked on development and implementation of a several computer vision algorithms to convert images of trademarked objects to corresponding industrial design sketches.• Developed a deep learning algorithm to generate an Image feature representation for cross-domain Image matching and ranking of design trademarks. Worked mainly in Python and PyTorch. Software Development Engineer, Flipkart <i>2015 - 2017 (2 Years)</i> <ul style="list-style-type: none">• Worked in Merchandising and Monetization team, developing server side applications for serving organic and monetised content on Flipkart.com mobile app and website.• Developed and tested various machine learning models to rank merchandising and organic content to maximize the revenue. Worked with Java, Python, Apache Spark, Hive, HiveQL and SQL.
Projects	Salient Object Detection using Faster RCNN (Master's Thesis) <i>PyTorch</i> Currently working on detection and ranking of Salient objects in an Image. Working on the Faster RCNN architecture, to modify the Region Proposal Network to include an Object Saliency Metric. Transfer learning for Digits Classification on MNIST Dataset <i>Python, Tensorflow</i> Trained an MNIST CNN 6-layered classifier on just the digits 1, 4, 5 and 9, and then used the trained model weights of the lower 4 layers to train a classifier for the rest of the MNIST. This approach of transfer learning helped us get an accuracy of 80% by just training on upper two layers for the rest of the digits. Interactive binary segmentation based on superpixels and graph-cuts <i>Python, OpenCV</i> Performed semi-automatic binary segmentation based on SLIC super-pixels and graph cut. Also developed an interactive application that lets user draw foreground and background markings, to generate a max-flow graph cut based segmented image. Beyond PassGAN - Using a VAEGAN to model password distribution <i>PyTorch</i> Improved on the current state of the art password modeling architecture, PassGAN by using Variational Auto Encoders, with a GAN Loss. The proposed algorithm was able to match a higher number of passwords in same number of generated words. <i>Rest of the projects are on my website ▷</i>
Publications	A Scalable and Robust Framework for Intelligent & Realtime Video Surveillance by Shreenath Dutt and Ankita Kalra, <i>ICACCI</i> , Sept. 2016 Presented an intelligent, reliable and storage efficient video surveillance system using Apache Storm and OpenCV. Listed in IEEE Xplore and arXiv.org
	Tags : <i>Applied Machine Learning, CUDA, GPU, Autonomous Driving, Convolutional Neural Networks, Image Segmentation, Object Detection, Data Structures, Git Version Control.</i>