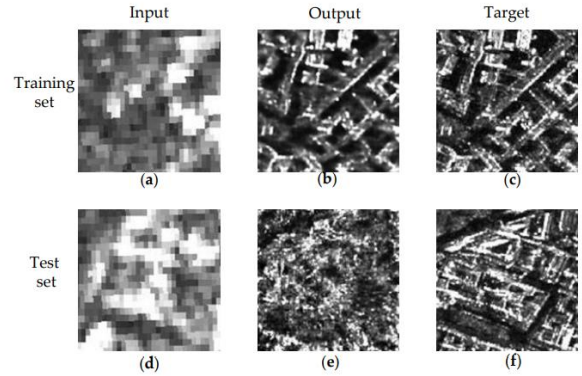
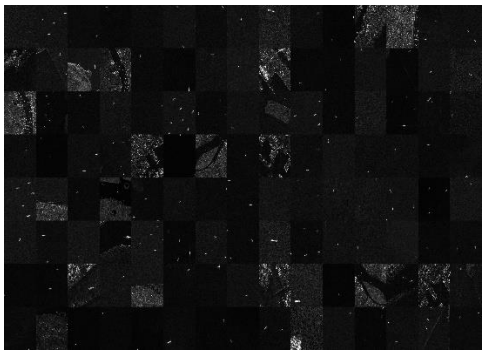
Progress Report

List of related journals:-

1) Dialectical GAN for SAR Image Translation: From Sentinel-1 to TerraSAR-X
   In this journal, Sentinel-1 images (low cost SAR images which are publicly available) is translated into TerraSAR-X (High cost SAR images). Here, cost is directly proportional to the image quality.
   Three approaches were used, VGG-19 , Texture Gram matrix and Conditional GAN (CGAN).
   The below shown image (a) is from the above journal which utilizes CGAN.
   Image (b) is my output which uses StyleGAN2 with SAR image dataset as input.



(a)



(b)

Explanation for the above distortion: - *Sir, since I was running this model for long period of time on Google colab, they have temporarily suspended my account for GPU/TPU usage. Adding to this, I have resized the image to 64x64 pixels to reduce the computational time. I certainly believe that I can get better results with unlimited access to a GPU and this result is only after 400 iterations.*

2) Synthetic data generation for end-to-end thermal infrared tracking:-
   This paper talks about Conversion from RGB to Thermal Infrared Images (TIR). This was accomplished by using pix-2-pix method and CycleGAN. I have implemented the basic pix2pix for the same and have got similar results.
   Below set of images are a few results. Image (3) is the set of outputs from the above journal. Image(1) is the implementation of Pix2Pix of a cityscape and Image(2) showcases the results of CycleGAN in translation of RGB to Thermal images.

(1)

(2)

(3)