# **DL** Assignment 2

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#### **Basic GAN Model:**

• Epochs: 250

• Learning rate: 0.0002 for both generator and discriminator

• Generator Loss in last epoch: 2.2444519996643066

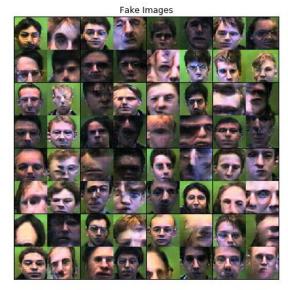
• Discriminator Loss in last epoch: 0.3921549320220947

• Examples:



• Real images and fake images generated by the generator after training





### **Auto-Encoder:**

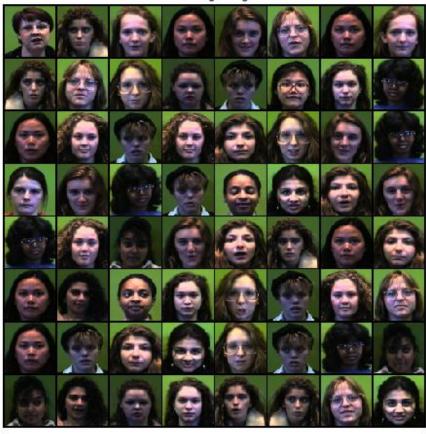
• Epochs:150

Learning rate: 0.0002

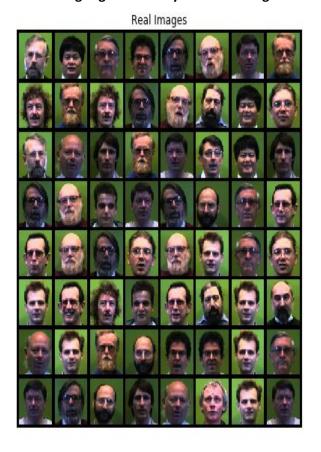
Average Loss in last epoch: 0.02336381282657385

• Training Images from the dataset





## Images generated by auto encoding:





### **GAN** with Auto-Encoder as generator:

- **Epochs for Auto-Encoder: 150**
- **Epochs for GAN: 250**
- **Common Learning rate: 0.0002**
- Generator Loss at last epoch: 2.4461557865142822
- Discriminator Loss at last epoch: 1.230971336364746
- Auto-Encoder in action to the training images:



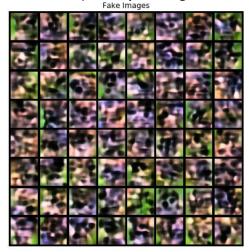


Obtained Images

• Images generated by providing random noise to encoder (before providing GAN training):

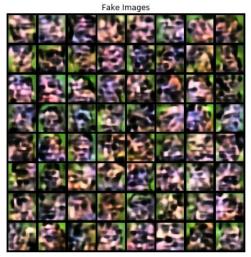
Real Images
Fake Images





• Images generated by providing random noise to decoder (before providing GAN training):





• Final images generated by the generator(after GAN training):

