ECS767P Emerging Topics in Machine Learning and Computer Vision, 2018

**Course Work 2:**

**Unsupervised Learning by Generative Adversarial Network**

1. **What is the difference between supervised learning & unsupervised learning in image classification task?** **(10% of CW2)**
2. **What is the difference between an auto-encoder and a generative adversarial network considering (1) model structure; (2) optimized objective function; (3) training procedure on different components. (10% of CW2)**
3. **How is the distribution learned by the generator compared to the real data distribution when the discriminator cannot tell the difference between these two distributions? (15% of CW2)**
4. **Show the generated images at 10 epochs, 20 epochs,50 epochs,100 epochs by using the architecture required in Guidance. (15% of CW2)**