This assignment consists of two main parts:

**Part 1: AutoEncoders and Variational AutoEncoders**  
You are tasked with:

1. Implementing a simple AutoEncoder (AE) and training it on the MNIST dataset
2. Implementing a Variational AutoEncoder (VAE) and training it on the MNIST dataset
3. Comparing the results of AE and VAE, including visualization of the latent space and reconstructed images
4. Exploring the impact of the regularization term in VAEs

**Part 2: PixelCNN**  
You are required to:

1. Implement an unconditional PixelCNN model for the MNIST dataset
2. Extend the implementation to a conditional PixelCNN with class label
3. Train both models and evaluate their performance on image generation and reconstruction

Please finish your assignment within the provided jupyter notebook files. If you need to create additional files, be sure to have a README!  
If you have any questions of the assignment, please let me know!