DLP HW4

多工所碩一 楊奕儒

ID：312553038

1. **Introduction**

**In this lab, I implemented conditional video prediction in a**

**VAE-based model. By taking pose images and source video as input, the model has the ability to predict the following future frames.**

**ii. Implementation details**

1. **How do you write your training protocol**

**To predict the next frame, first I used current video frame and current pose image as input to get the distribution z, which is generated by Gaussian\_Predictor . Next, I used current pose image , last generated frame and z as input to generate the current generated frame. After I generated the next frame, I used it to compared with the ground truth to calculate reconstruction\_loss by mse\_criterion. Also I calculated kl\_loss by kl\_criterion .The total loss of this step is the sum of reconstruction\_loss and kl\_loss**

**2. How do you implement reparameterization tricks**

**3. How do you set your teacher forcing strategy**

**4. How do you set your kl annealing ratio**

**iii. Analysis & Discussion**

**1. Plot Teacher forcing ratio**

**a. Analysis & compare with the loss curve**

**2. Plot the loss curve while training with different**

**settings. Analyze the difference between them**

**(10%)**

**a. With KL annealing (Monotonic)**

**b. With KL annealing (Cyclical)**

**c. Without KL annealing**

**3. Plot the PSNR-per frame diagram in validation**

**dataset**