

1. Show your model architecture and loss function.

- Encoder:

`Conv2d(in_channels=3, out_channels=20, kernel_size=3)`

`Relu()`

`Conv2d(in_channels=20, out_channels=2, kernel_size=3)`

`Relu()`

- Latent code:

加入 zero mean & 0.01 variance 的 Gaussian noise (註: 只有在 model inference 階段才會加噪, 於 training 階段沒有此指令)

- Decoder

`ConvTranspose2d(in_channels=2, out_channels=20, kernel_size=3)`

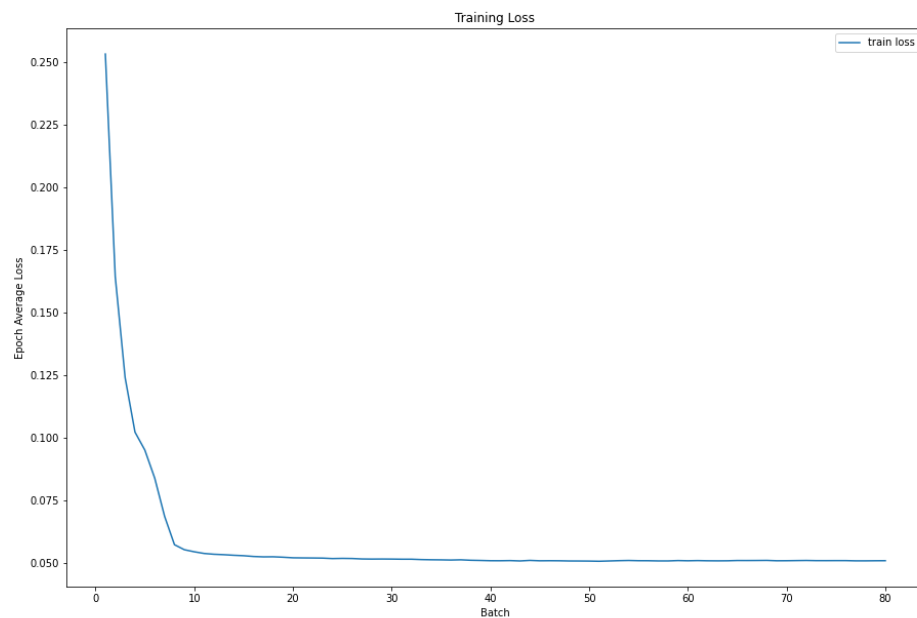
`Relu()`

`ConvTranspose2d(in_channels=20, out_channels=3, kernel_size=3)`

`Relu()`

- Loss function: Mean square error

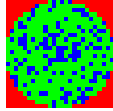
2. Plot training loss



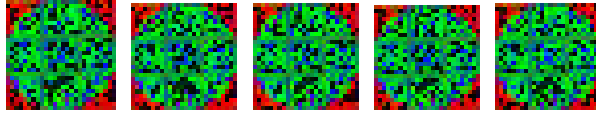
3. Visualize 5 generated samples for each class

- Class 0 (Center)

- Original

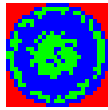


- 5 generated samples

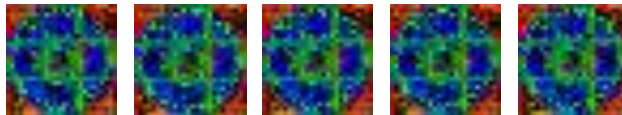


- Class 1 (Dount)

- Original

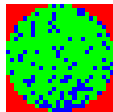


- 5 generated samples

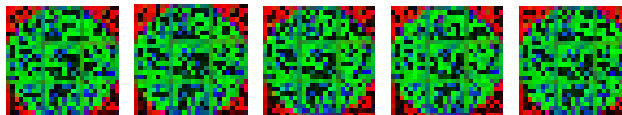


- Class 2 (Edge-Loc)

- Original

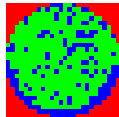


- 5 generated samples

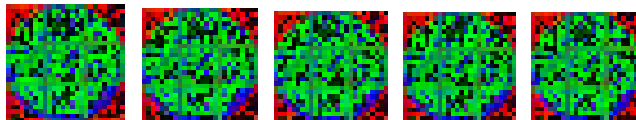


- Class 3 (Edge-Ring)

- Original

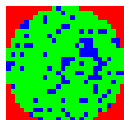


- 5 generated samples

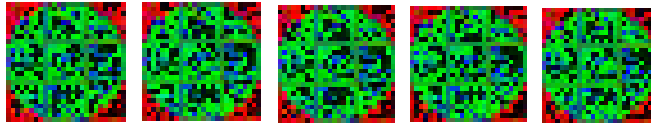


- Class 4 (Loc)

- Original

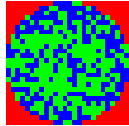


- 5 generated samples



- Class 5 (Near-full)

- Original

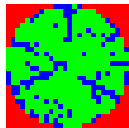


- 5 generated samples

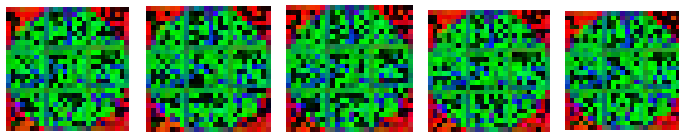


- Class 6 (Random)

- Original

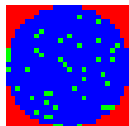


- 5 generated samples

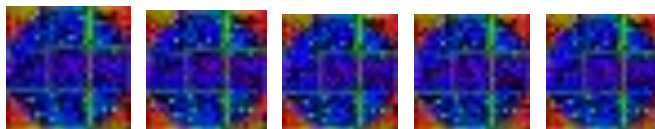


- Class 7 (Scratch)

- Original

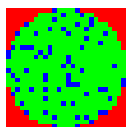


- 5 generated samples



- Class 8 (None)

- Original



- 5 generated samples

