

COMP4660/8420 Introduction to GAN and RL

Part 1. Theory questions

1. What is the main difference between the Generator and the Discriminator in a GAN that produces images?

The Discriminator is a CNN that determines whether the input is real or fake. The Generator uses convolutional transpose layers to try and create an image from a given input.

2. What is the goal of unsupervised pre-training?

To learn features of the data (patterns and structure) that are likely to be useful to the supervised learning problem.

3. What is the difference between Q-Learning and Policy Gradients?

Q-Learning aims to learn the Q value function to then infer the optimal policy. Policy Gradients aims to learn the optimal policy directly.