Machine Learning

Seminar 10

1. Below are some statements of supervised learning and reinforcement learning. Are they true or false?

- Supervised learning requires large amounts of hand-labelled training data
- Reinforcement learning learns from a scalar reward signal that is frequently sparse, noisy, and delayed
- Supervised learning assumes the data samples are independent
- Reinforcement learning encounters sequences of highly correlated state
- Supervised learning assumes a fixed underlying distribution
- In reinforcement learning the data distribution changes as the algorithm learns new behaviours

2. What's the problem with Basic Q-learning? Why do we need Deep Q learning? What is the basic idea of Deep Q Learning?

3. Is Deep Q learning a model-free and off-policy method?

4. What is exploration and exploitation in deep Q learning?

5. Write down the general procedures of deep Q Learning.