

# [Pre-Lab] Open Gym, PyTorch, and Deep Q-Network (DQN) 2013

Jae Yun JUN KIM\*

**Lab due:** Before the beginning of next lab session

**Evaluation:** Show and explain the code and results to the professor

**Remark:**

- Only groups of two or three people accepted (preferably three).
  - No plagiarism. If plagiarism happens, both the “lender” and the “borrower” will have a zero.
  - Do thoroughly all the demanded tasks.
  - Study the theory for the questions.
  - There is NO make-up lab session.
- 

## 1 Tasks

### 1.1 Open Gym

1. Follow the instructions given in **practice\_gym.pdf** file.
2. Show the results of Open Gym animation to Professor.

### 1.2 PyTorch

1. Follow the instructions given in **practice\_pytorch\_1.pdf** file.
2. Among all the results that you obtain from these instructions, show the following results to Professor:
  - The results of Section 4 (Linear regression),
  - The results of Section 5 (Classification regression),
  - The results of Section 6 (Fine tuning deep learning models with PyTorch),
  - The results of Section 9 (Implementing a CNN).

### 1.3 Deep Q-Network (DQN) 2013

1. Follow the instructions given in **practice\_dqn2013.pdf** file.
2. Show the following results:
  - a. For training, show the learning curve
  - b. For inference, show the animation by loading the optimized model parameters.

---

\*ECE Paris Graduate School of Engineering, 10 Rue Sextius Michel 75015 Paris, France; jae-yun.jun-kim@ece.fr