

# Assignment 1: Imitation Learning

huseyinabanox@gmail.com

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## 1 Behavioral Cloning

### 1.1 Answer

Following files are modified:

- rl\_trainer.py
- bc\_agent.py
- MLP\_policy.py
- replay\_buffer.py
- utils.py
- pytorch\_utils.py

### 1.2 Answer

eval\_batch\_size 5000  
ep\_len 1000  
num\_agent\_train\_steps\_per\_iter 1000  
n\_layers 2  
size 64  
learning\_rate 0.0005

	Hopper	Ant	HalfCheetah	Walker2d
Eval_AverageReturn	961	4604	4009	441
Eval_StdReturn	285	91	67	325
Train_AverageReturn	3773	4714	4206	5567
Train_StdReturn	2	12	83	9
Log_Loss	-351	-1518	-804	-507

### 1.3 Answer

Walker2d is performing worst. Mean and std results indicate learning is not happening. First thing to play with is the learning rate. After finding a reasonable LR, then training steps are adjusted.

