Assignment 1: Imitation Learning

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1 Behavioral Cloning

2. Results for behavioral cloning (BC) on two tasks.

Table 1: Environment: Ant-v2 vs. Hopper-v2. **Settings**: num_agent_train_steps_per_iter: 10000; n_iter: 1; batch_size: 1000; eval_batch_size: 50000; train_batch_size: 100; n_layers: 2; size(hidden layer): 64; seed: 1.

	Ant-v2	**Hopper-v2**
Expert Policy	4713.65	3772.67
Behavioral Cloning (Eval)	4641.92 ± 444.91	1018.06 ± 168.47

3. Results for BC on different number of gradient steps.

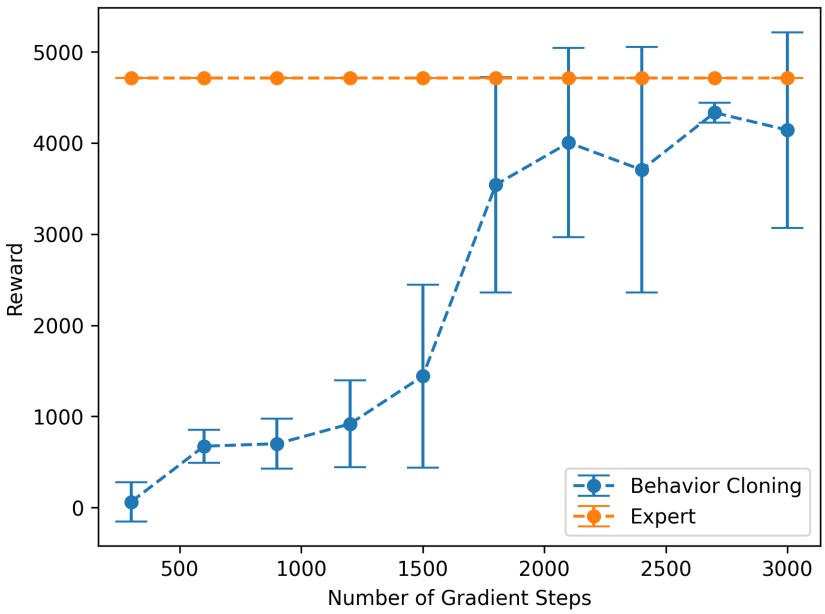

Figure 1: Steps: 300 to 3000, diff: 300. **Settings**: env_name: Ant-v2; n_iter: 1; batch_size: 1000; eval_batch_size: 10000; train_batch_size: 100; n_layers: 2; size(hidden layer): 64; seed: 1.

2 DAgger

2. Results for BC with DAgger(DA) on two tasks and different number of iterations.

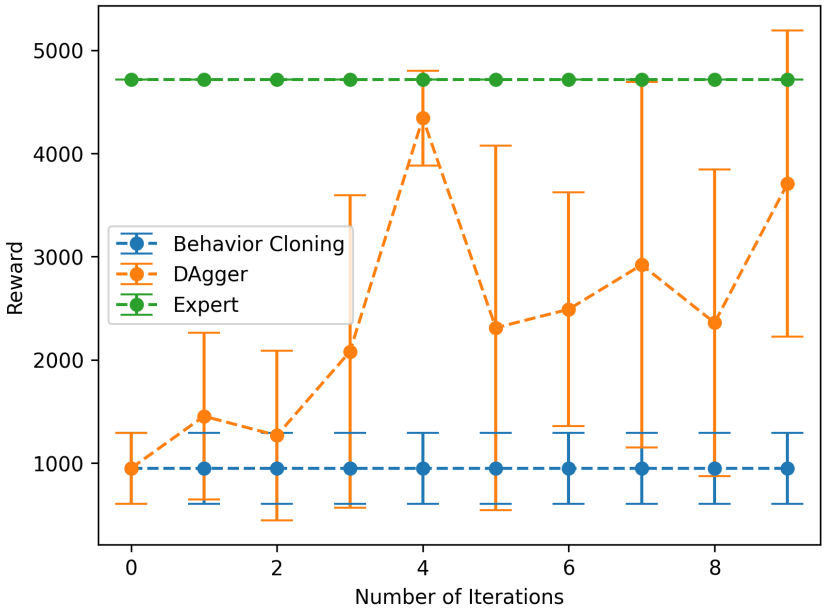

Figure 2: Iterations: 10. **Settings**: env_name: Ant-v2; eval_batch_size: 5000; num_agent_train_steps_per_iter: 1000; everything else same as section **1**.

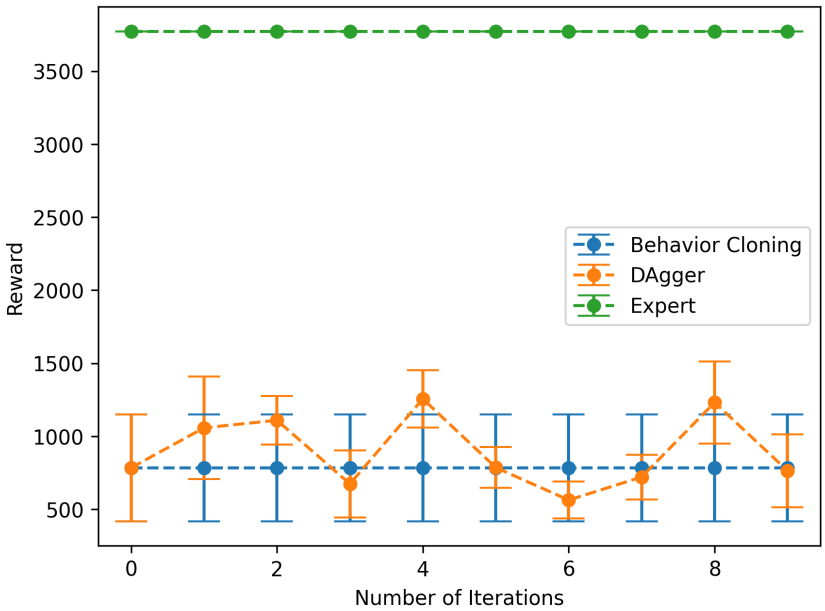

Figure 3: Iterations: 10. **Settings**: env_name: Hopper-v2; eval_batch_size: 5000; num_agent_train_steps_per_iter: 1000; everything else same as section **1**.