

Comparison between BC and Expert agents on Ant-v2

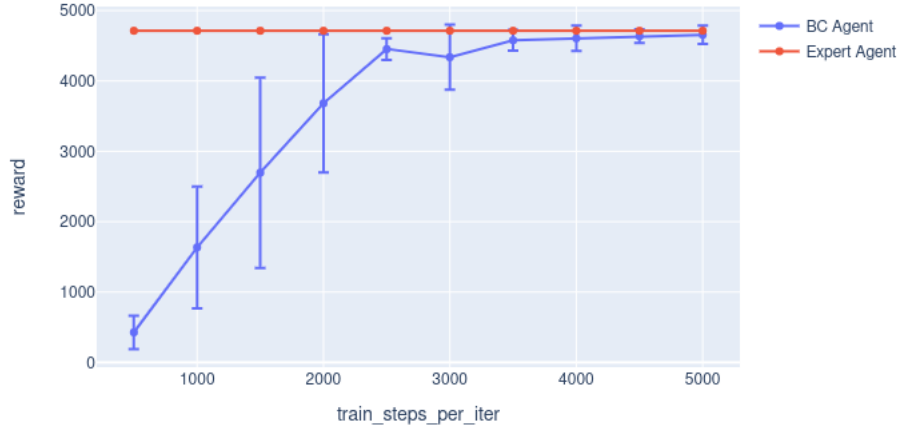


Figure 1: Comparison between Behavioral Cloning and Expert agents on Ant-v2

1 Behavioral Cloning

Table 1: Results for Ant-v2 and Humanoid-v2; Training data points: 5000; Evaluation data points: > 5000; Batch size: 5000; Number of iterations: 200000; Hidden layers: 4; Layer size: 128;

	Ant-v2	Humanoid-v2
Expert Policy	4713.65	10344.52
Behavioral Cloning	4656.66 ± 128.76	166.37 ± 116.14

1.2 Table 1 shows the different between performance of Dagger and Behavioral Cloning. The environments tested were Ant-V2 and Humanoid-V2.

1.3 Figure [1] shows a graph comparing performance between expert and BC. The x-axis shows the number of train steps per iteration. It is possible to visualize that grater the number of training steps the better is the performance and smaller is the variance.

2 Dagger

2.2 Figure [2] shows a fair comparison between BC,Dagger and Expert agents. Using the same hyperparameters for BC on the last section, with 200000 steps training per iteration, the dagger has 40 iterations and 5000 steps training per iteration(Total: 200000). As we can see, dagger achieves performance similar to expert agent, but BC shows worse performance between them.

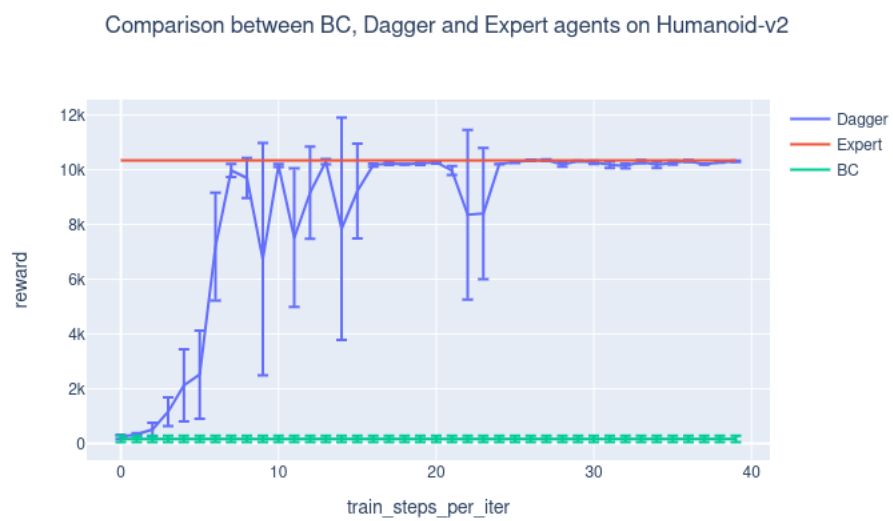


Figure 2: Comparison between Behavioral Cloning, Expert and Dagger agents on Humanoid-v2