Assignment 4: Model Based RL

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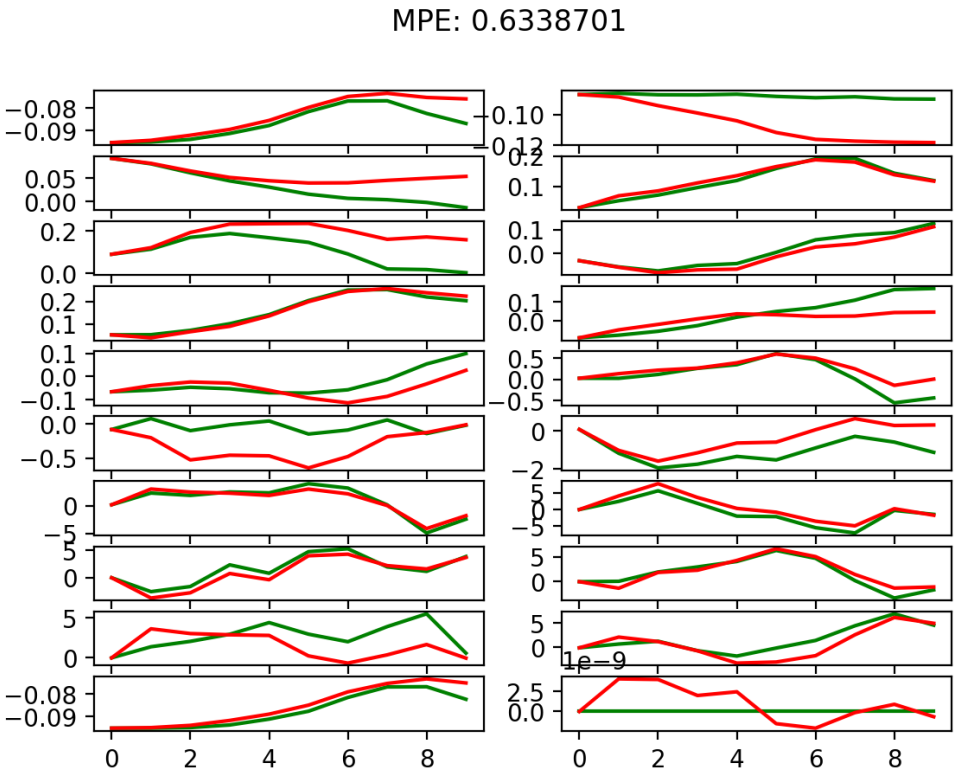
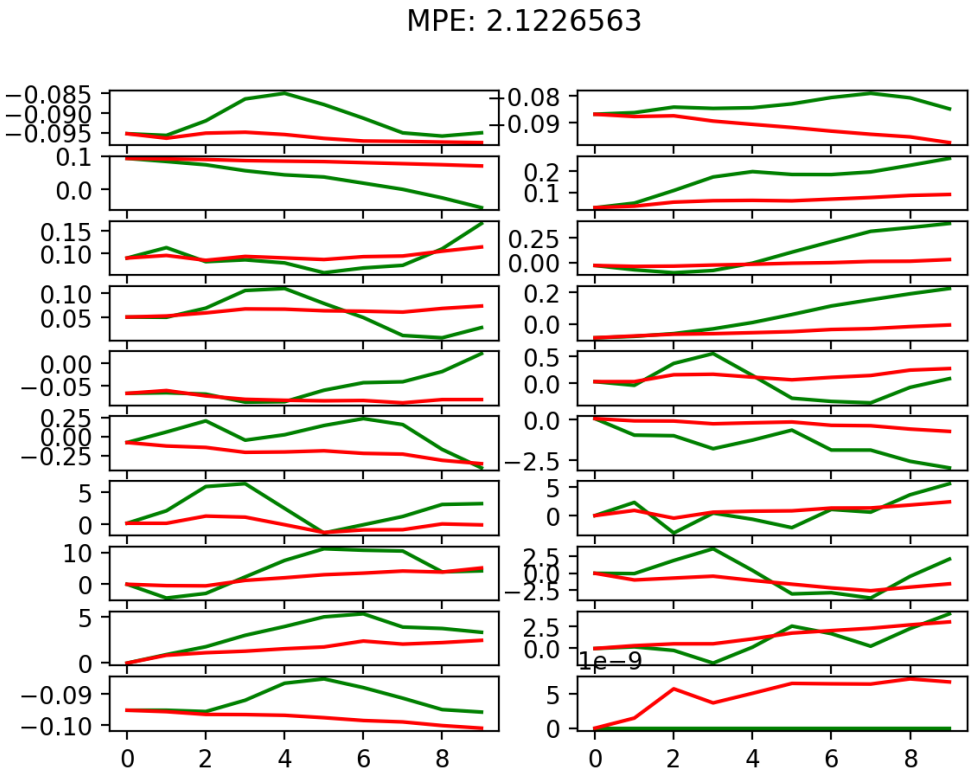
Problem 1

First Run



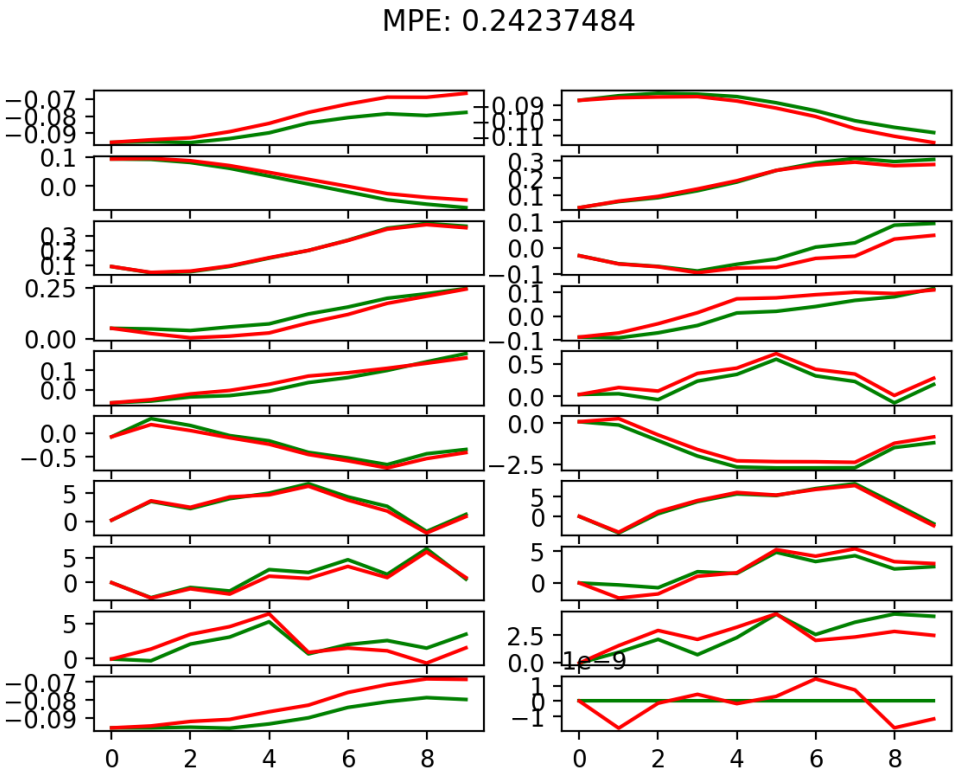
A small network is used. Results can be improved using a larger network.

Second Run



Small number of iterations are used. Results can be improved by increasing iteration count. MPE is the worst.

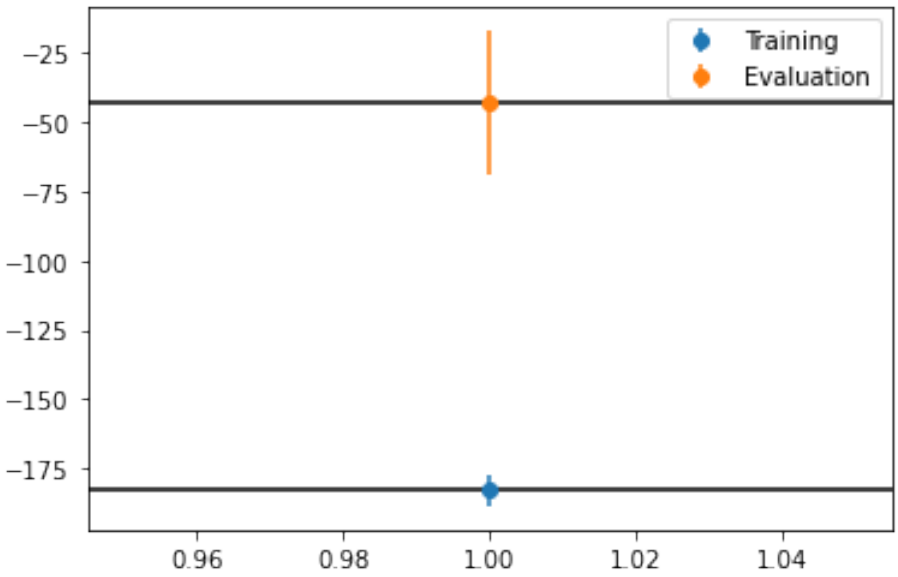
Third Run



Best results are obtained using a larger network and more iterations. MPE is the best.

Problem 2

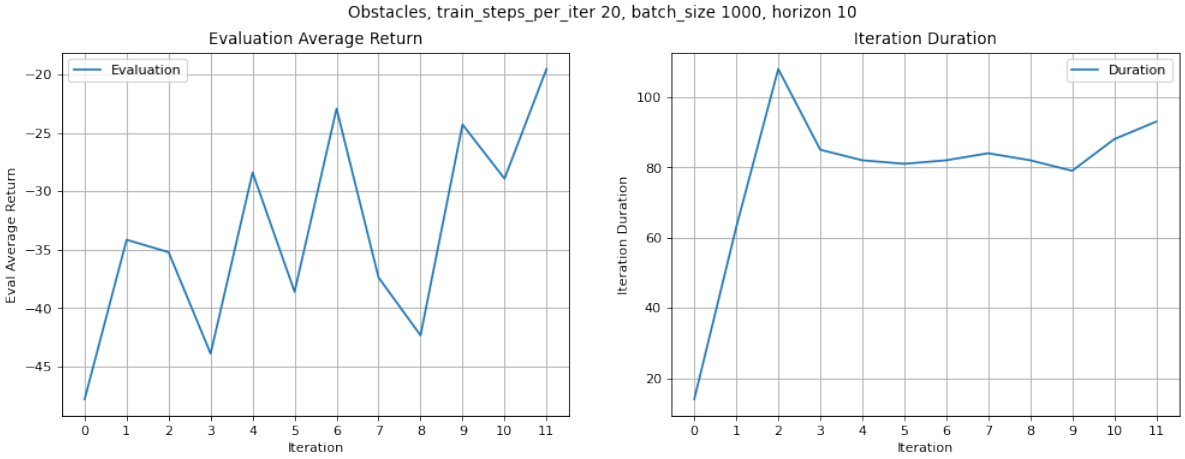
Train AverageReturn is expected to be around -160 and Eval AverageReturn is expected to be around -70 to -50.



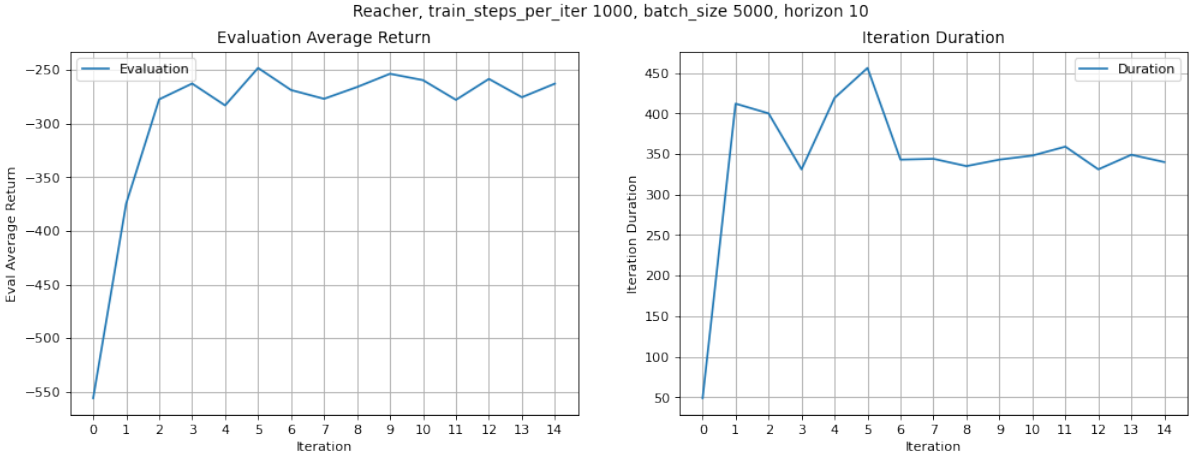
Actual returns are around the expected values.

Problem 3

MBRL algorithm with on-policy data collection and iterative model training. Rl trainer.py already aggregates your collected data into a replay buffer. Thus, iterative training means to just train on our growing replay buffer while collecting new data at each iteration using the most newly trained model.



Rewards of around -25 to -20 is expected for the obstacles env. The actual results are similar.



Rewards of around -250 to -300 is expected for the reacher env. The actual results are similar.

Rewards of around 250 to 350 is expected for the cheetah env. The actual results are similar.