

Answers

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1 Screenshot of costs

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Running cartpole with diffferent initializations....  
case 0 average cost: 5.336095815745766  
case 1 average cost: 145.7925767716327  
case 2 average cost: 637.72382393723  
case 3 average cost: 1779.7848063808112  
case 4 average cost: 4542.118541283069  
case 5 average cost: inf  
case 6 average cost: inf  
case 7 average cost: inf
```

2 5.8.1 explanations

The reason why the costs are different for each case (and specifically, increasing for each case) is because the the starting state of the cartpole is increasingly off center and so it has to correct more. Sometimes, it isn't even able to recenter ever.

3 5.9.1 cost

For the recorded cartpole mp4, the cost for cartpole is 2.9389989129204.