

File - main

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1 C:/Users/Salvo/AppData/Local/Microsoft/WindowsApps/python3.8.exe "C:/Users/Salvo/GitHub/MicroRacer_Corinaldesi_Fiorilla
- Copy/ppo/main.py"
2 2022-01-30 17:02:17.279933: W tensorflow/stream_executor/platform/default/dso_loader.cc:64] Could not load dynamic
library 'cudart64_110.dll'; dlsym: cudart64_110.dll not found
3 2022-01-30 17:02:17.280160: I tensorflow/stream_executor/cuda/cudart_stub.cc:29] Ignore above cudart dlsym if you do
not have a GPU set up on your machine.
4 2022-01-30 17:02:22.828534: W tensorflow/stream_executor/platform/default/dso_loader.cc:64] Could not load dynamic
library 'cudart64_110.dll'; dlsym: cudart64_110.dll not found
5 2022-01-30 17:02:22.828824: W tensorflow/stream_executor/platform/default/dso_loader.cc:64] Could not load dynamic
library 'cublas64_11.dll'; dlsym: cublas64_11.dll not found
6 2022-01-30 17:02:22.829081: W tensorflow/stream_executor/platform/default/dso_loader.cc:64] Could not load dynamic
library 'cublasLt64_11.dll'; dlsym: cublasLt64_11.dll not found
7 2022-01-30 17:02:22.829333: W tensorflow/stream_executor/platform/default/dso_loader.cc:64] Could not load dynamic
library 'cufft64_10.dll'; dlsym: cufft64_10.dll not found
8 2022-01-30 17:02:22.829615: W tensorflow/stream_executor/platform/default/dso_loader.cc:64] Could not load dynamic
library 'curand64_10.dll'; dlsym: curand64_10.dll not found
9 2022-01-30 17:02:22.829865: W tensorflow/stream_executor/platform/default/dso_loader.cc:64] Could not load dynamic
library 'cusolver64_11.dll'; dlsym: cusolver64_11.dll not found
10 2022-01-30 17:02:22.830118: W tensorflow/stream_executor/platform/default/dso_loader.cc:64] Could not load dynamic
library 'cusparse64_11.dll'; dlsym: cusparse64_11.dll not found
11 2022-01-30 17:02:22.830395: W tensorflow/stream_executor/platform/default/dso_loader.cc:64] Could not load dynamic
library 'cudnn64_8.dll'; dlsym: cudnn64_8.dll not found
12 2022-01-30 17:02:22.830550: W tensorflow/core/common_runtime/gpu/gpu_device.cc:1835] Cannot dlopen some GPU libraries.
Please make sure the missing libraries mentioned above are installed properly if you would like to use GPU. Follow the
guide at https://www.tensorflow.org/install/gpu for how to download and setup the required libraries for your platform.
13 Skipping registering GPU devices...
14 2022-01-30 17:02:22.831039: I tensorflow/core/platform/cpu_feature_guard.cc:142] This TensorFlow binary is optimized
with oneAPI Deep Neural Network Library (oneDNN) to use the following CPU instructions in performance-critical
operations: AVX AVX2
15 To enable them in other operations, rebuild TensorFlow with the appropriate compiler flags.
16 CURRENT ACTOR-CRITIC NETWORK IN USE
17 Model: "ActorNet"
18 -----
19 Layer (type)          Output Shape         Param #  Connected to
20 =====
21 input_1 (InputLayer) [(None, 5)]        0
22 -----
23 layer_1 (Dense)      (None, 128)         768       input_1[0][0]
24 -----
25 layer_2 (Dense)      (None, 128)         16512     layer_1[0][0]
26 -----
27 layer_3 (Dense)      (None, 128)         16512     layer_2[0][0]
28 -----
29 layer_4 (Dense)      (None, 128)         16512     layer_3[0][0]
30 -----
31 acc_out_mu (Dense)  (None, 1)            129       layer_4[0][0]
32 -----
33 dir_out_mu (Dense)  (None, 1)            129       layer_4[0][0]
34 -----
35 concatenate (Concatenate) (None, 2)        0         acc_out_mu[0][0]
36                               dir_out_mu[0][0]
37 -----
38 Total params: 50,562
39 Trainable params: 50,562
40 Non-trainable params: 0
41 -----
42 Model: "CriticNet"
43 -----
44 Layer (type)          Output Shape         Param #
45 =====
46 input_2 (InputLayer) [(None, 5)]        0
47 -----
48 layer_1 (Dense)      (None, 128)         768
49 -----
50 layer_2 (Dense)      (None, 128)         16512
51 -----
52 layer_3 (Dense)      (None, 128)         16512
53 -----
54 dense (Dense)        (None, 1)            129
55 -----
56 Total params: 33,921
57 Trainable params: 33,921
58 Non-trainable params: 0
59 -----
60 Started Training ...
61 Hyperparameters:
62 Actor_lr 3e-05. Critic_lr 0.0001. clip_value 0.1. N_epochs 200. steps_per_epoch 4096. train_iteraion 50.
target_mean_diff 0.0225.
63 2022-01-30 17:02:23.488023: I tensorflow/compiler/mlir/mlir_graph_optimization_pass.cc:185] None of the MLIR
Optimization Passes are enabled (registered 2)
64 2022-01-30 17:02:23.545623: W tensorflow/core/grappler/optimizers/loop_optimizer.cc:907] Skipping loop optimization for
Merge node with control input: accleration_norm/assert_positive/assert_less/Assert/AssertGuard/branch_executed/_18
65 2022-01-30 17:03:44.203343: W tensorflow/core/grappler/optimizers/loop_optimizer.cc:907] Skipping loop optimization for
Merge node with control input: StatefulPartitionedCall/direction_norm/assert_positive/assert_less/Assert/AssertGuard/
branch_executed/_467
66 2022-01-30 17:03:48.380868: W tensorflow/python/util/util.cc:348] Sets are not currently considered sequences, but this
may change in the future, so consider avoiding using them.
67 Epoch: 1.    UP Best ! Mean Return: -2.8540258407592773.    Trajectories: 293.  Mean Length: 13.979522184300341.
68 Epoch: 2.    UP Best ! Mean Return: -2.8539626598358154.    Trajectories: 363.  Mean Length: 11.28374655647383.

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69 Epoch: 3. UP Best ! Mean Return: -2.834073781967163. Trajectories: 255. Mean Length: 16.062745098039215.
70 Epoch: 4. DOWN Mean Return: -2.8481576442718506. Trajectories: 283. Mean Length: 14.473498233215548.
71 Epoch: 5. DOWN Mean Return: -2.848184108734131. Trajectories: 302. Mean Length: 13.562913907284768.
72 Epoch: 6. DOWN Mean Return: -2.85477876663208. Trajectories: 310. Mean Length: 13.212903225806452.
73 Epoch: 7. DOWN Mean Return: -2.8553478717803955. Trajectories: 288. Mean Length: 14.222222222222221.
74 Epoch: 8. UP Mean Return: -2.8374671936035156. Trajectories: 187. Mean Length: 21.90374331550802.
75 Epoch: 9. DOWN Mean Return: -2.8488478660583496. Trajectories: 254. Mean Length: 16.125984251968504.
76 saving models
77 Epoch: 10. UP Best ! Mean Return: -2.8200020790100098. Trajectories: 166. Mean Length: 24.674698795180724.
78 Epoch: 11. DOWN Mean Return: -2.831589698791504. Trajectories: 229. Mean Length: 17.88046288209607.
79 Epoch: 12. UP Mean Return: -2.8222148418426514. Trajectories: 237. Mean Length: 17.282700421940927.
80 Epoch: 13. UP Best ! Mean Return: -2.813777208328247. Trajectories: 216. Mean Length: 18.962962962962962.
81 Epoch: 14. DOWN Mean Return: -2.8146727085113525. Trajectories: 161. Mean Length: 25.440993788819874.
82 Epoch: 15. UP Best ! Mean Return: -2.8124940395355225. Trajectories: 173. Mean Length: 23.67630057803468.
83 Epoch: 16. UP Best ! Mean Return: -2.7899038791656494. Trajectories: 148. Mean Length: 27.675675675675677.
84 Epoch: 17. DOWN Mean Return: -2.7925217151641846. Trajectories: 143. Mean Length: 28.643356643356643.
85 Epoch: 18. UP Best ! Mean Return: -2.766998052597046. Trajectories: 152. Mean Length: 26.94736842105263.
86 Epoch: 19. DOWN Mean Return: -2.7702085971832275. Trajectories: 102. Mean Length: 40.15686274509804.
87 saving models
88 Epoch: 20. UP Best ! Mean Return: -2.7560713291168213. Trajectories: 110. Mean Length: 37.236363636363635.
89 Epoch: 21. DOWN Mean Return: -2.7858502864837646. Trajectories: 142. Mean Length: 28.845070422535212.
90 Epoch: 22. UP Mean Return: -2.7653789592026367. Trajectories: 122. Mean Length: 33.57377049180328.
91 Epoch: 23. UP Best ! Mean Return: -2.69935941696167. Trajectories: 77. Mean Length: 53.1948051948052.
92 Epoch: 24. DOWN Mean Return: -2.7051687240600586. Trajectories: 70. Mean Length: 58.51428571428571.
93 Epoch: 25. DOWN Mean Return: -2.7564003467559814. Trajectories: 99. Mean Length: 41.37373737373738.
94 Epoch: 26. UP Mean Return: -2.739590883255005. Trajectories: 86. Mean Length: 47.627906976744185.
95 Epoch: 27. UP Mean Return: -2.70094423675537. Trajectories: 99. Mean Length: 41.37373737373738.
96 Epoch: 28. DOWN Mean Return: -2.705871105194092. Trajectories: 84. Mean Length: 48.76190476190476.
97 Epoch: 29. UP Best ! Mean Return: -2.688868284225464. Trajectories: 78. Mean Length: 52.51282051282051.
98 saving models
99 Epoch: 30. DOWN Mean Return: -2.7217421531677246. Trajectories: 85. Mean Length: 48.188235294117646.
100 Epoch: 31. UP Mean Return: -2.708676338195801. Trajectories: 89. Mean Length: 46.02247191011236.
101 Epoch: 32. UP Best ! Mean Return: -2.629513740539551. Trajectories: 64. Mean Length: 64.0.
102 Epoch: 33. DOWN Mean Return: -2.658257246017456. Trajectories: 71. Mean Length: 57.690140845070424.
103 Epoch: 34. DOWN Mean Return: -2.699655771255493. Trajectories: 90. Mean Length: 45.51111111111111.
104 Epoch: 35. UP Best ! Mean Return: -2.6149075031280518. Trajectories: 56. Mean Length: 73.14285714285714.
105 Epoch: 36. DOWN Mean Return: -2.653483826904297. Trajectories: 67. Mean Length: 61.134328358208954.
106 Epoch: 37. UP Best ! Mean Return: -2.597785472869873. Trajectories: 48. Mean Length: 85.33333333333333.
107 Epoch: 38. DOWN Mean Return: -2.6694977283477783. Trajectories: 68. Mean Length: 60.23529411764706.
108 Epoch: 39. DOWN Mean Return: -2.678952932357788. Trajectories: 90. Mean Length: 45.51111111111111.
109 saving models
110 Epoch: 40. UP Mean Return: -2.6023669242858887. Trajectories: 75. Mean Length: 54.613333333333334.
111 Epoch: 41. DOWN Mean Return: -2.6746037006378174. Trajectories: 84. Mean Length: 48.76190476190476.
112 Epoch: 42. UP Mean Return: -2.632049322128296. Trajectories: 90. Mean Length: 45.51111111111111.
113 Epoch: 43. DOWN Mean Return: -2.6524531841278076. Trajectories: 73. Mean Length: 56.10958904109589.
114 Epoch: 44. UP Mean Return: -2.64036226272583. Trajectories: 98. Mean Length: 41.795918367346935.
115 Epoch: 45. UP Mean Return: -2.6180665493011475. Trajectories: 66. Mean Length: 62.06060606060606.
116 Epoch: 46. UP Best ! Mean Return: -2.3335063457489014. Trajectories: 32. Mean Length: 128.0.
117 Epoch: 47. DOWN Mean Return: -2.450146436691284. Trajectories: 44. Mean Length: 93.0909090909091.
118 Epoch: 48. DOWN Mean Return: -2.650902727806913. Trajectories: 95. Mean Length: 43.11578947368421.
119 Epoch: 49. UP Mean Return: -2.369757890701294. Trajectories: 34. Mean Length: 120.47058823529412.
120 saving models
121 Epoch: 50. DOWN Mean Return: -2.680828332901001. Trajectories: 119. Mean Length: 34.42016806722689.
122 Epoch: 51. UP Mean Return: -2.557142972946167. Trajectories: 86. Mean Length: 47.627906976744185.
123 Epoch: 52. DOWN Mean Return: -2.563307762145996. Trajectories: 71. Mean Length: 57.690140845070424.
124 Epoch: 53. UP Mean Return: -2.493058204650879. Trajectories: 75. Mean Length: 54.613333333333334.
125 Epoch: 54. DOWN Mean Return: -2.6270923614501953. Trajectories: 101. Mean Length: 40.554455445544555.
126 Epoch: 55. UP Mean Return: -2.4810707569122314. Trajectories: 79. Mean Length: 51.848101265822784.
127 Epoch: 56. DOWN Mean Return: -2.592411756515503. Trajectories: 83. Mean Length: 49.34939759036145.
128 Epoch: 57. UP Mean Return: -2.4706532955169678. Trajectories: 77. Mean Length: 53.1948051948052.
129 Epoch: 58. UP Mean Return: -2.4589805603027344. Trajectories: 70. Mean Length: 58.51428571428571.
130 Epoch: 59. DOWN Mean Return: -2.4658145904541016. Trajectories: 50. Mean Length: 81.92.
131 saving models
132 Epoch: 60. UP Mean Return: -2.428356409072876. Trajectories: 62. Mean Length: 66.06451612903226.
133 Epoch: 61. DOWN Mean Return: -2.5949668884277344. Trajectories: 92. Mean Length: 44.52173913043478.
134 Epoch: 62. UP Best ! Mean Return: -2.316495656967163. Trajectories: 45. Mean Length: 91.0222222222223.
135 completed
136 Epoch: 63. UP Best ! Mean Return: -2.0872364044189453. Trajectories: 35. Mean Length: 117.02857142857142.
137 Epoch: 64. DOWN Mean Return: -2.260056495666504. Trajectories: 44. Mean Length: 93.0909090909091.
138 Epoch: 65. UP Mean Return: -2.1491332054138184. Trajectories: 34. Mean Length: 120.47058823529412.
139 completed
140 Epoch: 66. UP Mean Return: -2.1001715660095215. Trajectories: 37. Mean Length: 110.70270270270271.
141 completed
142 Epoch: 67. DOWN Mean Return: -2.418238878250122. Trajectories: 67. Mean Length: 61.134328358208954.
143 Epoch: 68. UP Mean Return: -2.385274887084961. Trajectories: 64. Mean Length: 64.0.
144 Epoch: 69. UP Mean Return: -2.23272967338562. Trajectories: 41. Mean Length: 99.90243902439025.
145 saving models
146 Epoch: 70. DOWN Mean Return: -2.471595287322998. Trajectories: 87. Mean Length: 47.08045977011494.
147 Epoch: 71. UP Mean Return: -2.3817288875579834. Trajectories: 61. Mean Length: 67.14754098360656.
148 Epoch: 72. UP Mean Return: -2.194389581680298. Trajectories: 55. Mean Length: 74.47272727272727.
149 completed
150 completed
151 Epoch: 73. UP Best ! Mean Return: -1.595788598060608. Trajectories: 34. Mean Length: 120.47058823529412.
152 Epoch: 74. DOWN Mean Return: -2.3686814308166504. Trajectories: 74. Mean Length: 55.351351351351354.
153 completed
154 Epoch: 75. UP Mean Return: -2.0217344760894775. Trajectories: 38. Mean Length: 107.78947368421052.
155 Epoch: 76. UP Mean Return: -1.9597200155258179. Trajectories: 32. Mean Length: 128.0.
156 completed
157 Epoch: 77. UP Best ! Mean Return: -1.3941397666931152. Trajectories: 19. Mean Length: 215.57894736842104.

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158 completed
159 Epoch: 78. DOWN      Mean Return: -2.018479585647583. Trajectories: 47. Mean Length: 87.14893617021276.
160 completed
161 Epoch: 79. UP Best ! Mean Return: -1.3734503984451294. Trajectories: 24. Mean Length: 170.66666666666666.
162 saving models
163 Epoch: 80. DOWN      Mean Return: -1.7415440082550049. Trajectories: 25. Mean Length: 163.84.
164 completed
165 Epoch: 81. DOWN      Mean Return: -1.9977558851242065. Trajectories: 45. Mean Length: 91.02222222222223.
166 Epoch: 82. DOWN      Mean Return: -2.033085584640503. Trajectories: 43. Mean Length: 95.25581395348387.
167 Epoch: 83. DOWN      Mean Return: -2.036254405975342. Trajectories: 34. Mean Length: 120.47058823529412.
168 Epoch: 84. DOWN      Mean Return: -2.046154499053955. Trajectories: 42. Mean Length: 97.52380952380952.
169 Epoch: 85. DOWN      Mean Return: -2.149509906768799. Trajectories: 43. Mean Length: 95.25581395348387.
170 Epoch: 86. DOWN      Mean Return: -2.1767613887786865. Trajectories: 54. Mean Length: 75.85185185185185.
171 Epoch: 87. DOWN      Mean Return: -2.1779870986938477. Trajectories: 46. Mean Length: 89.04347826086956.
172 completed
173 Epoch: 88. UP       Mean Return: -1.6455070972442627. Trajectories: 33. Mean Length: 124.12121212121212.
174 Epoch: 89. DOWN      Mean Return: -2.263554811477661. Trajectories: 61. Mean Length: 67.14754098360656.
175 completed
176 saving models
177 Epoch: 90. UP       Mean Return: -2.0304720401763916. Trajectories: 43. Mean Length: 95.25581395348837.
178 Epoch: 91. DOWN      Mean Return: -2.0636110305786133. Trajectories: 48. Mean Length: 85.33333333333333.
179 completed
180 completed
181 Epoch: 92. UP       Mean Return: -1.5499991178512573. Trajectories: 39. Mean Length: 105.02564102564102.
182 Epoch: 93. DOWN      Mean Return: -2.184448003768921. Trajectories: 61. Mean Length: 67.14754098360656.
183 Epoch: 94. UP       Mean Return: -1.9128684997558594. Trajectories: 40. Mean Length: 102.4.
184 completed
185 Epoch: 95. UP       Mean Return: -1.8967987298965454. Trajectories: 44. Mean Length: 93.0909090909091.
186 completed
187 completed
188 Epoch: 96. UP Best ! Mean Return: -0.8335803747177124. Trajectories: 23. Mean Length: 178.08695652173913.
189 completed
190 Epoch: 97. DOWN      Mean Return: -1.4920674562454224. Trajectories: 32. Mean Length: 128.0.
191 Epoch: 98. DOWN      Mean Return: -1.861788272857666. Trajectories: 38. Mean Length: 107.78947368421052.
192 completed
193 Epoch: 99. UP       Mean Return: -1.407295823097229. Trajectories: 27. Mean Length: 151.7037037037037.
194 completed
195 saving models
196 Epoch: 100. DOWN     Mean Return: -1.8665809631347656. Trajectories: 44. Mean Length: 93.0909090909091.
197 completed
198 Epoch: 101. UP       Mean Return: -0.8652129173278809. Trajectories: 19. Mean Length: 215.57894736842104.
199 completed
200 Epoch: 102. DOWN     Mean Return: -1.5476940870285034. Trajectories: 32. Mean Length: 128.0.
201 Epoch: 103. DOWN     Mean Return: -1.7906808853149414. Trajectories: 31. Mean Length: 132.1290322580645.
202 Epoch: 104. UP       Mean Return: -1.2343559265136719. Trajectories: 27. Mean Length: 151.7037037037037.
203 completed
204 completed
205 Epoch: 105. UP       Mean Return: -1.0815526247024536. Trajectories: 30. Mean Length: 136.53333333333333.
206 Epoch: 106. DOWN     Mean Return: -2.053734302520752. Trajectories: 57. Mean Length: 71.85964912280701.
207 Epoch: 107. UP       Mean Return: -1.8793516159057617. Trajectories: 45. Mean Length: 91.02222222222223.
208 Epoch: 108. DOWN     Mean Return: -2.002070903778076. Trajectories: 43. Mean Length: 95.25581395348387.
209 Epoch: 109. UP       Mean Return: -1.9346390962600708. Trajectories: 45. Mean Length: 91.02222222222223.
210 saving models
211 Epoch: 110. UP       Mean Return: -1.9337854385375977. Trajectories: 42. Mean Length: 97.52380952380952.
212 completed
213 Epoch: 111. UP       Mean Return: -1.0109013319015503. Trajectories: 26. Mean Length: 157.53846153846155.
214 completed
215 completed
216 Epoch: 112. DOWN     Mean Return: -1.4213093519210815. Trajectories: 33. Mean Length: 124.12121212121212.
217 completed
218 Epoch: 113. DOWN     Mean Return: -1.6412827968597412. Trajectories: 36. Mean Length: 113.77777777777777.
219 completed
220 Epoch: 114. UP       Mean Return: -1.132063627243042. Trajectories: 30. Mean Length: 136.53333333333333.
221 Epoch: 115. DOWN     Mean Return: -1.8296946287155151. Trajectories: 38. Mean Length: 107.78947368421052.
222 completed
223 Epoch: 116. UP       Mean Return: -1.5253136157989502. Trajectories: 31. Mean Length: 132.1290322580645.
224 Epoch: 117. DOWN     Mean Return: -1.640035629272461. Trajectories: 36. Mean Length: 113.77777777777777.
225 completed
226 Epoch: 118. DOWN     Mean Return: -1.6612215042114258. Trajectories: 40. Mean Length: 102.4.
227 Epoch: 119. DOWN     Mean Return: -2.0712146759033203. Trajectories: 50. Mean Length: 81.92.
228 completed
229 completed
230 completed
231 saving models
232 Epoch: 120. UP       Mean Return: -1.0375725030899048. Trajectories: 31. Mean Length: 132.1290322580645.
233 completed
234 completed
235 Epoch: 121. DOWN     Mean Return: -1.5250656604766846. Trajectories: 42. Mean Length: 97.52380952380952.
236 Epoch: 122. UP       Mean Return: -1.3751202821731567. Trajectories: 32. Mean Length: 128.0.
237 completed
238 Epoch: 123. DOWN     Mean Return: -1.897072434425354. Trajectories: 56. Mean Length: 73.14285714285714.
239 Epoch: 124. UP       Mean Return: -1.2539845705032349. Trajectories: 24. Mean Length: 170.66666666666666.
240 completed
241 completed
242 Epoch: 125. UP Best ! Mean Return: -0.7156977653503418. Trajectories: 22. Mean Length: 186.1818181818182.
243 completed
244 completed
245 Epoch: 126. DOWN     Mean Return: -1.180647373199463. Trajectories: 26. Mean Length: 157.53846153846155.
246 completed

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247 completed
248 completed
249 Epoch: 127. UP      Mean Return: -0.9294586777687073.    Trajectories: 29.    Mean Length: 141.24137931034483.
250 completed
251 completed
252 Epoch: 128. DOWN    Mean Return: -0.9465158581733704.    Trajectories: 24.    Mean Length: 170.66666666666666.
253 completed
254 completed
255 Epoch: 129. DOWN    Mean Return: -1.4566618204116821.    Trajectories: 41.    Mean Length: 99.90243902439025.
256 completed
257 saving models
258 Epoch: 130. UP      Mean Return: -1.0151749849319458.    Trajectories: 20.    Mean Length: 204.8.
259 completed
260 completed
261 Epoch: 131. DOWN    Mean Return: -1.6670836210250854.    Trajectories: 34.    Mean Length: 120.47058823529412.
262 completed
263 completed
264 Epoch: 132. DOWN    Mean Return: -1.6931686401367188.    Trajectories: 42.    Mean Length: 97.52380952380952.
265 completed
266 completed
267 Epoch: 133. UP  Best ! Mean Return: -0.15563136339187622.    Trajectories: 16.    Mean Length: 256.0.
268 completed
269 completed
270 Epoch: 134. DOWN    Mean Return: -1.698163628578186.    Trajectories: 51.    Mean Length: 80.31372549019608.
271 completed
272 completed
273 completed
274 Epoch: 135. UP  Best ! Mean Return: 0.005115705542266369.    Trajectories: 17.    Mean Length: 240.94117647058823.
275 completed
276 completed
277 completed
278 Epoch: 136. DOWN    Mean Return: -1.5348026752471924.    Trajectories: 37.    Mean Length: 110.70270270270271.
279 completed
280 completed
281 completed
282 Epoch: 137. UP      Mean Return: -0.5037119388580322.    Trajectories: 24.    Mean Length: 170.66666666666666.
283 Epoch: 138. DOWN    Mean Return: -1.7398383835772705.    Trajectories: 40.    Mean Length: 102.4.
284 completed
285 completed
286 Epoch: 139. UP      Mean Return: -0.900631308555603.    Trajectories: 26.    Mean Length: 157.53846153846155.
287 completed
288 completed
289 completed
290 completed
291 saving models
292 Epoch: 140. UP  Best ! Mean Return: 0.2544844150543213.    Trajectories: 18.    Mean Length: 227.55555555555554.
293 completed
294 Epoch: 141. DOWN    Mean Return: -1.1453959941864014.    Trajectories: 25.    Mean Length: 163.84.
295 completed
296 completed
297 Epoch: 142. UP      Mean Return: -0.4189654588699341.    Trajectories: 23.    Mean Length: 178.08695652173913.
298 completed
299 completed
300 completed
301 completed
302 Epoch: 143. UP      Mean Return: -0.044002871960401535.    Trajectories: 21.    Mean Length: 195.04761904761904.
303 completed
304 completed
305 Epoch: 144. DOWN    Mean Return: -0.6672760844230652.    Trajectories: 24.    Mean Length: 170.66666666666666.
306 completed
307 completed
308 completed
309 Epoch: 145. UP  Best ! Mean Return: 0.5995892286300659.    Trajectories: 14.    Mean Length: 292.57142857142856.
310 completed
311 completed
312 Epoch: 146. DOWN    Mean Return: -0.17337051033973694.    Trajectories: 20.    Mean Length: 204.8.
313 completed
314 completed
315 completed
316 Epoch: 147. DOWN    Mean Return: -0.6185145974159241.    Trajectories: 26.    Mean Length: 157.53846153846155.
317 completed
318 completed
319 completed
320 Epoch: 148. UP      Mean Return: 0.49769607186317444.    Trajectories: 13.    Mean Length: 315.0769230769231.
321 completed
322 completed
323 Epoch: 149. UP  Best ! Mean Return: 0.9528779983520508.    Trajectories: 12.    Mean Length: 341.333333333333.
324 completed
325 completed
326 saving models
327 Epoch: 150. DOWN    Mean Return: -1.3774772882461548.    Trajectories: 34.    Mean Length: 120.47058823529412.
328 completed
329 completed
330 Epoch: 151. UP      Mean Return: 0.14575640857219696.    Trajectories: 18.    Mean Length: 227.55555555555554.
331 completed
332 completed
333 completed
334 Epoch: 152. DOWN    Mean Return: -0.9421695470809937.    Trajectories: 32.    Mean Length: 128.0.
335 completed
```

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336 completed			
337 Epoch: 153. DOWN	Mean Return: -1.5198646783828735.	Trajectories: 40.	Mean Length: 102.4.
338 completed			
339 Epoch: 154. UP	Mean Return: -0.7588551640510559.	Trajectories: 24.	Mean Length: 170.6666666666666.
340 completed			
341 completed			
342 completed			
343 Epoch: 155. UP	Mean Return: 0.32989561557769775.	Trajectories: 18.	Mean Length: 227.55555555555554.
344 completed			
345 completed			
346 completed			
347 Epoch: 156. DOWN	Mean Return: -0.3698568642139435.	Trajectories: 23.	Mean Length: 178.08695652173913.
348 completed			
349 completed			
350 Epoch: 157. DOWN	Mean Return: -1.6139836311340332.	Trajectories: 29.	Mean Length: 141.24137931034483.
351 completed			
352 completed			
353 completed			
354 Epoch: 158. UP	Mean Return: -0.7798816561698914.	Trajectories: 27.	Mean Length: 151.7037037037037.
355 completed			
356 completed			
357 completed			
358 Epoch: 159. UP	Mean Return: -0.5494861006736755.	Trajectories: 23.	Mean Length: 178.08695652173913.
359 completed			
360 saving models			
361 Epoch: 160. DOWN	Mean Return: -0.5548214912414551.	Trajectories: 17.	Mean Length: 240.94117647058823.
362 completed			
363 completed			
364 completed			
365 Epoch: 161. DOWN	Mean Return: -0.7291852831840515.	Trajectories: 25.	Mean Length: 163.84.
366 completed			
367 completed			
368 completed			
369 completed			
370 Epoch: 162. UP	Mean Return: 0.09496642649173737.	Trajectories: 18.	Mean Length: 227.55555555555554.
371 completed			
372 completed			
373 Epoch: 163. DOWN	Mean Return: -1.4926687479019165.	Trajectories: 32.	Mean Length: 128.0.
374 completed			
375 completed			
376 completed			
377 Epoch: 164. UP	Mean Return: -0.7657788991928101.	Trajectories: 32.	Mean Length: 128.0.
378 completed			
379 completed			
380 Epoch: 165. DOWN	Mean Return: -1.7117334604263306.	Trajectories: 49.	Mean Length: 83.59183673469387.
381 completed			
382 completed			
383 completed			
384 Epoch: 166. UP	Mean Return: -1.352765440940857.	Trajectories: 39.	Mean Length: 105.02564102564102.
385 completed			
386 completed			
387 completed			
388 completed			
389 Epoch: 167. UP	Mean Return: -0.8574597239494324.	Trajectories: 33.	Mean Length: 124.121212121212.
390 completed			
391 completed			
392 completed			
393 Epoch: 168. UP	Mean Return: 0.10004101693630219.	Trajectories: 18.	Mean Length: 227.55555555555554.
394 completed			
395 completed			
396 Epoch: 169. DOWN	Mean Return: -0.5258865356445312.	Trajectories: 19.	Mean Length: 215.57894736842104.
397 completed			
398 saving models			
399 Epoch: 170. DOWN	Mean Return: -1.3406380414962769.	Trajectories: 44.	Mean Length: 93.0909090909091.
400 completed			
401 completed			
402 completed			
403 Epoch: 171. UP	Mean Return: -0.4243209660053253.	Trajectories: 22.	Mean Length: 186.18181818182.
404 completed			
405 completed			
406 completed			
407 Epoch: 172. DOWN	Mean Return: -0.6773952841758728.	Trajectories: 27.	Mean Length: 151.7037037037037.
408 completed			
409 completed			
410 Epoch: 173. DOWN	Mean Return: -1.1539652347564697.	Trajectories: 35.	Mean Length: 117.02857142857142.
411 completed			
412 completed			
413 completed			
414 Epoch: 174. DOWN	Mean Return: -1.18805992603302.	Trajectories: 32.	Mean Length: 128.0.
415 completed			
416 completed			
417 completed			
418 Epoch: 175. UP	Mean Return: 0.05951963737607002.	Trajectories: 20.	Mean Length: 204.8.
419 completed			
420 completed			
421 completed			
422 completed			
423 Epoch: 176. DOWN	Mean Return: -0.08354634791612625.	Trajectories: 24.	Mean Length: 170.6666666666666.
424 completed			

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425 completed
426 completed
427 Epoch: 177. DOWN      Mean Return: -1.3493316173553467.    Trajectories: 45.    Mean Length: 91.0222222222223.
428 completed
429 completed
430 Epoch: 178. UP        Mean Return: -0.3692450523376465.    Trajectories: 22.    Mean Length: 186.1818181818182.
431 completed
432 completed
433 completed
434 Epoch: 179. UP        Mean Return: -0.2245248407125473.    Trajectories: 22.    Mean Length: 186.1818181818182.
435 completed
436 completed
437 completed
438 completed
439 saving models
440 Epoch: 180. DOWN      Mean Return: -0.5721858143806458.    Trajectories: 27.    Mean Length: 151.7037037037037.
441 completed
442 completed
443 Epoch: 181. UP        Mean Return: -0.5103209018707275.    Trajectories: 27.    Mean Length: 151.7037037037037.
444 completed
445 completed
446 completed
447 Epoch: 182. DOWN      Mean Return: -1.101011872291565.    Trajectories: 34.    Mean Length: 120.47058823529412.
448 completed
449 completed
450 completed
451 Epoch: 183. UP        Mean Return: 0.8758195042610168.    Trajectories: 14.    Mean Length: 292.57142857142856.
452 completed
453 completed
454 completed
455 Epoch: 184. DOWN      Mean Return: 0.0326424315571785.    Trajectories: 21.    Mean Length: 195.04761904761904.
456 completed
457 completed
458 completed
459 Epoch: 185. DOWN      Mean Return: -0.7532662153244019.    Trajectories: 27.    Mean Length: 151.7037037037037.
460 completed
461 Epoch: 186. UP        Mean Return: -0.30947738885879517.    Trajectories: 20.    Mean Length: 204.8.
462 completed
463 completed
464 completed
465 Epoch: 187. UP        Mean Return: -0.2870866656303406.    Trajectories: 21.    Mean Length: 195.04761904761904.
466 completed
467 completed
468 completed
469 Epoch: 188. DOWN      Mean Return: -0.5739026069641113.    Trajectories: 27.    Mean Length: 151.7037037037037.
470 completed
471 completed
472 completed
473 Epoch: 189. UP        Mean Return: 0.3851267397403717.    Trajectories: 18.    Mean Length: 227.55555555555554.
474 completed
475 completed
476 completed
477 completed
478 saving models
479 Epoch: 190. DOWN      Mean Return: -0.21166151762008667.    Trajectories: 27.    Mean Length: 151.7037037037037.
480 completed
481 completed
482 completed
483 completed
484 Epoch: 191. UP        Mean Return: 0.06283557415008545.    Trajectories: 20.    Mean Length: 204.8.
485 completed
486 completed
487 completed
488 completed
489 completed
490 Epoch: 192. UP        Mean Return: 0.2216157466173172.    Trajectories: 23.    Mean Length: 178.08695652173913.
491 completed
492 completed
493 Epoch: 193. DOWN      Mean Return: -0.5640406608581543.    Trajectories: 24.    Mean Length: 170.6666666666666.
494 completed
495 completed
496 Epoch: 194. DOWN      Mean Return: -0.7487943768501282.    Trajectories: 35.    Mean Length: 117.02857142857142.
497 completed
498 completed
499 completed
500 Epoch: 195. DOWN      Mean Return: -0.9917887449264526.    Trajectories: 36.    Mean Length: 113.77777777777777.
501 completed
502 completed
503 completed
504 completed
505 completed
506 Epoch: 196. UP        Mean Return: -0.26663267612457275.    Trajectories: 26.    Mean Length: 157.53846153846155.
507 completed
508 completed
509 completed
510 Epoch: 197. DOWN      Mean Return: -0.44205570220947266.    Trajectories: 27.    Mean Length: 151.7037037037037.
511 completed
512 completed
513 completed
```

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514 completed
515 Epoch: 198. DOWN      Mean Return: -0.9348204135894775.    Trajectories: 37.    Mean Length: 110.70270270270271.
516 completed
517 completed
518 completed
519 completed
520 Epoch: 199. UP       Mean Return: 0.3718605637550354. Trajectories: 20.    Mean Length: 204.8.
521 completed
522 completed
523 saving models
524 Epoch: 200. DOWN      Mean Return: -0.5832121968269348.   Trajectories: 24.    Mean Length: 170.66666666666666.
525 Training completed _
```

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528

529 Process finished with exit code 0

530