

environment	symbol	hyperparameter values
Lunar Lander	H_based	['batch_size': 16, 'n_steps': 6720, 'gamma': 0.9959713930285174, 'learning_rate': 0.0006775254254374189, 'n_epochs': 5, 'clip_range': 0.2889836600993812, 'gae_lambda': 0.9858111198753257]
	H_21	['batch_size': 128, 'n_steps': 6848, 'gamma': 0.999232076008961, 'learning_rate': 0.0015814787559273393, 'n_epochs': 5, 'clip_range': 0.2968575197168429, 'gae_lambda': 0.9676636030587324]
	H_22	['batch_size': 256, 'n_steps': 4736, 'gamma': 0.9965340722946804, 'learning_rate': 0.0021886149373170844, 'n_epochs': 5, 'clip_range': 0.1728537315025567, 'gae_lambda': 0.9267132592413907]
	H_23	['batch_size': 8, 'n_steps': 6848, 'gamma': 0.998503511677947, 'learning_rate': 0.0004567947143227571, 'n_epochs': 5, 'clip_range': 0.12468861944611186, 'gae_lambda': 0.8813492787770341]
	H_24	['batch_size': 128, 'n_steps': 6912, 'gamma': 0.9992551002441824, 'learning_rate': 0.0016991063396771834, 'n_epochs': 5, 'clip_range': 0.28166753465030664, 'gae_lambda': 0.9694435700053803]
	H_31 ¹	['batch_size': 128, 'buffer_size': 1000000, 'gamma': 0.9839923929578793, 'noise_std': 0.26728168450714124, 'learning_rate': 0.00018992566517462038, 'tau': 0.005, 'train_freq': 16, 'gradient_steps': 128]
	H_32 ²	['batch_size': 32, 'buffer_size': 100000, 'gamma': 0.99, 'learning_rate': 0.0037435099582206195, 'learning_starts': 20000, 'tau': 0.01, 'train_freq': 128, 'gradient_steps': 512]
	H_33 ³	['batch_size': 128, 'buffer_size': 1000000, 'gamma': 0.98, 'learning_rate': 0.00015314983631606004, 'learning_starts': 0, 'tau': 0.02, 'train_freq': 1, 'gradient_steps': 4, 'top_quantiles_to_drop_per_net': 0, 'n_quantiles': 12]
	H_34 ⁴	['batch_size': 128, 'buffer_size': 1000000, 'gamma': 0.995, 'noise_std': 0.9835200949632787, 'learning_rate': 0.00020269647156352695, 'tau': 0.005, 'train_freq': 4, 'gradient_steps': 8]
Pendulum	H_based	[batch_size: 64, n_steps: 5056, gamma: 0.9741220907251389, learning_rate: 0.0010672146718286866, n_epochs: 10, clip_range: 0.21079005022258343, gae_lambda: 0.8086980782125599]
	H_21	['batch_size': 128, 'n_steps': 7168, 'gamma': 0.9126022183463831, 'learning_rate': 0.0005940450961747367, 'n_epochs': 20, 'clip_range': 0.33895320584700733, 'gae_lambda': 0.8700225105173911]
	H_22	['batch_size': 32, 'n_steps': 6208, 'gamma': 0.886146621924327, 'learning_rate': 0.0007189639383586805, 'n_epochs': 10, 'clip_range': 0.21950486682714387, 'gae_lambda': 0.8549450580889233]
	H_23	['batch_size': 32, 'n_steps': 5376, 'gamma': 0.9462772871561818, 'learning_rate': 0.0003995321942427602, 'n_epochs': 20, 'clip_range': 0.3083266285450791, 'gae_lambda': 0.8242778578779988]

¹ <https://stable-baselines3.readthedocs.io/en/master/modules/ddpg.html>

² <https://stable-baselines3.readthedocs.io/en/master/modules/sac.html>

³ <https://sb3-contrib.readthedocs.io/en/master/modules/tqc.html>

⁴ <https://stable-baselines3.readthedocs.io/en/master/modules/td3.html>

	H_24	['batch_size': 64, 'n_steps': 6912, 'gamma': 0.9103634565035998, 'learning_rate': 0.00035858281865525814, 'n_epochs': 20, 'clip_range': 0.2779412583087546, 'gae_lambda': 0.9058083860180379]
	H_31	['batch_size': 1024, 'buffer_size': 10000, 'gamma': 0.9332845133724786, 'noise_std': 0.7482657372159108, 'learning_rate': 0.0013669971512440856, 'tau': 0.05, 'train_freq': 64, 'gradient_steps': 64]
	H_32	['batch_size': 128, 'buffer_size': 1000000, 'gamma': 0.995, 'learning_rate': 0.000562301045595862, 'learning_starts': 1000, 'tau': 0.08, 'train_freq': 1, 'gradient_steps': 32]
	H_33	['batch_size': 128, 'buffer_size': 10000, 'gamma': 0.95, 'learning_rate': 0.00011766677667306279, 'learning_starts': 10000, 'tau': 0.02, 'train_freq': 512, 'gradient_steps': 256, 'top_quantiles_to_drop_per_net': 3, 'n_quantiles': 29]
	H_34	['batch_size': 2048, 'buffer_size': 1000000, 'gamma': 0.999, 'noise_std': 0.5127950505953394, 'learning_rate': 0.00019473098062278903, 'tau': 0.005, 'train_freq': 1, 'gradient_steps': 1]
Mountain Car Continuous	H_based	['batch_size': 16, 'n_steps': 7616, 'gamma': 0.8849943207734652, 'learning_rate': 0.0010244830153997469, 'n_epochs': 20, 'clip_range': 0.20381705609220702, 'gae_lambda': 0.8604403546655337]
	H_21	['batch_size': 8, 'n_steps': 6208, 'gamma': 0.9185892275023241, 'learning_rate': 0.004224055794292608, 'n_epochs': 10, 'clip_range': 0.21303944035219943, 'gae_lambda': 0.8445330596165352]
	H_22	['batch_size': 16, 'n_steps': 8192, 'gamma': 0.8911486265979175, 'learning_rate': 0.0002526724963919991, 'n_epochs': 20, 'clip_range': 0.19954098439085813, 'gae_lambda': 0.8498810421193769]
	H_23	['batch_size': 256, 'n_steps': 3136, 'gamma': 0.9546733021541268, 'learning_rate': 0.002738851289451412, 'n_epochs': 20, 'clip_range': 0.23031950703224877, 'gae_lambda': 0.9425157788773443]
	H_24	['batch_size': 128, 'n_steps': 2048, 'gamma': 0.961904592453925, 'learning_rate': 0.001149702016542051, 'n_epochs': 20, 'clip_range': 0.2057447489995108, 'gae_lambda': 0.942925712818124]
	H_31	['batch_size': 64, 'buffer_size': 1000000, 'gamma': 0.9788033143476176, 'noise_std': 0.8647260711585298, 'learning_rate': 0.00010629138105368415, 'tau': 0.01, 'train_freq': 128, 'gradient_steps': 256]
	H_32	['batch_size': 1024, 'buffer_size': 1000000, 'gamma': 0.9999, 'learning_rate': 0.0006798481317696185, 'learning_starts': 10000, 'tau': 0.02, 'train_freq': 32, 'gradient_steps': 8]
	H_33	['batch_size': 128, 'buffer_size': 10000, 'gamma': 0.99, 'learning_rate': 0.00011574971392402415, 'learning_starts': 10000, 'tau': 0.005, 'train_freq': 64, 'gradient_steps': 256, 'top_quantiles_to_drop_per_net': 6, 'n_quantiles': 13]
	H_34	['batch_size': 16, 'buffer_size': 1000000, 'gamma': 0.98, 'noise_std': 0.15007838061374013, 'learning_rate': 8.963009346457138e-05, 'tau': 0.08, 'train_freq': 1, 'gradient_steps': 8]