Result till 9 Jan 2023

	Noise	Test Iterations (100)				Test Iterations (1000)				File saved
		Succe ss Rate	Collisio n Rate	Me an Dis t	lma ge id	Succe ss Rate	Collisi on Rate	Mean Dist	Image Id	
Base Model	0	74	26	N/A	1	69.70	30.20	0.30	2	v1.zip
		75	25	N/A	3	69.70	30.30	N/A	4	v1_10 00000 0_step s.zip
Noisy Model	0.01	77	23	N/A	5	69.80	30.20	N?A	6	v5_2d _noise _0.01
	0.1	51	29	0.7 7	7	54	31.50	0.86	8	v5_2d _noise _0.1
LPF	0.1, alpha= 0.1	31	69	N/A	9	39.40	60.60	N/A	10	v6_I_0 .1_exp _avg_ alpha= 0.1
	0.1, alpha= 0.3	64	36	N/A	11	62.40	37.60	N/A	12	v6_lpf _0.1_e xp_av g
Kalman Filter	0.1 measur ement noise +0.01 process noise	63	37	N/A	13	60.60	39.40	N/A	14	v6_kf
		50	50	N/A	15	64.80	35.20	N/A	16	v6_kf_ not_so _good
		60	40	N/A	17 (se ed 5)	64.10	35.90	N/A	18 (seed 5)	

Note: KF with 0.1 measurement noise and 0.01 process noise is giving 60,40 result with random seed(5) model name: v6_kf_not_so_good [17] image

Images:

```
Imag
                                                             Image
e Id
                                                                 (rl) bhaskar.joshi@gnode060 //Dronecontroly/ScAgent //Inotse // Inotse // In
1
                                                               | 100/100 [00:55<00:00, 1.79it/s]
                                                                 Success Rate: 74.00%
Collision Rate: 26.00%
Monibistance to Target: N/A
Mean Reward: 391.23
Minimum Reward: -1614.08
Maximium Reward: 1139.46
Mean Episode Duration: 256.38 steps
Shortest Episode: 1 steps
Longest Episode: 786 steps
                                                                 python <u>EvaluateModel.py</u>
2
                                                              randomizeDronePosition=False, randomizerargetrostion=False, each of the drone's .urdf:
[INFO] BaseAviary.__init__() loaded parameters from the drone's .urdf:
[INFO] m 0.027600, L 0.039700,
[INFO] to 0.080010, ty 0.080014, izz 0.000022,
[INFO] tix 0.080010, ty 0.080014, izz 0.000022,
[INFO] tix 0.080010, tw 0.080010, tw 0.080000,
[INFO] tix 0.258000, max_speed kmh 30.000000,
[INFO] gnd_eff_coeff_11.368590, prop_radius_0.023135,
[INFO] dray_x_coeff_0.080001, drag_z_coeff_0.080001,
[INFO] dray_x_coeff_0.080001, drag_z_coeff_0.080001,
[INFO] dray_x_coeff_12267_180000, dw_coeff_2 0.160000, dw_coeff_3 -0.110000
[INFO] dw_coeff_12267_180000, dw_coeff_2 0.160000, dw_coeff_3 -0.110000
[INFO] dray_split_miniconda3/envs/rl/lib/python3.9/site-packages/gym/spaces/box.py:73: UserWarning: WARN: Box_bound_precision_lowered_by_casting_to_float32_loager.warn(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1000/1000 [08:14<00:00, 2.02it/s]
                                                                   EVALUATION STATISTICS
                                                                 Success Rate: 69.70%
Collision Rate: 30.20%
Mean Distance to Target: 0.30
Mean Reward: 377.18
Minimum Reward: -1798.77
Maximium Reward: -2881.65
Mean Episode Duration: 261.63 steps
Shortest Episode: 1 steps
Longest Episode: 1000 steps
                                                               python EvaluateModel.py
pybullet build time: May 20 2022 19:45:31
Config Data: Namespace(xmin=0, xmax=2, ymin=-0.5, ymax=0.5, zmin=0, zmax=1, useSafetyBounds=True, minObstacles=0, maxObstacles=4, randomizeObstaclesEveryEpis
ode=True, assistlearning=False, lenientUntil=100000, fixedAltitude=True, episodeLength=1000, showGeoFence=True, showTrajectory=True, showFroximityLines=True,
randomizeDronePosition=False, randomizeTargetPosition=False, freq=240, aggregatePhyStep=5, noise=False, mean=0, std_dev=0.1, denoiser='None', measurement_nois
e=0.1)
[INFO] BaseAviary.__init__() loaded parameters from the drone's .urdf:
[INFO] BaseAviary.__init__() loaded parameters from the drone's .urdf:
[INFO] ix 0.000014, iy 0.0000014, izz 0.000022,
[INFO] ix 0.0000014, iy 0.0000014, izz 0.000022,
[INFO] of 0.0000004, im 0.0000004, im 0.0000000,
[INFO] of deff. coeff 1.1365590, prop_radius 0.023135,
[INFO] drag xy.coeff 0.000001, drag z coeff 0.000001,
[INFO] drag xy.coeff 0.000001, drag z coeff 0.000001,
[INFO] drag coeff 0.20071.100000, dw_coeff 2.0.1100000

/home2/bhaskar.joshi/miniconda3/envs/rl/lib/python3.9/site-packages/gym/spaces/box.py:73: UserWarning: WARNI: Box bound precision lowered by casting to float32 logger.warn(
models/ppo_vl_10M

| 1000/100 [00:49<00:00, 2.011t/s]
                                                                                                                                                                                                                                                                                                                     python <u>EvaluateModel.py</u>
3
                                                                                                                                                          Success Rate: 75.00%
Collision Rate: 25.00%
Mean Distance to Target: N/A
Mean Revard: 384.62
Minimum Reward: -1677.20
Maximium Reward: 1148.41
Mean Episode Duration: 260.92 steps
Shortest Episode: 1 steps
Longest Episode: 802 steps
```

```
(rl) bhaskar.joshi@gnode060 //OroneControl/SBAgent // noise.r python EvaluateModel.py
pybullet build time: May 20 2022 19:45:31
Config Data: Namespace(xmin=0, xmax=2, ymin=-0.5, ymax=0.5, zmin=0, zmax=1, useSafetyBounds=True, minObstacles=0, maxObstacles=4, randomizeObstaclesEveryEpis
ode=True, assistlearning=False, lenientUntil=100000, fixedAltitude=True, episodeLength=1000, showGeoFence=True, showTrajectory=True, showProximityLines=True,
randomizeDronePosition=False, randomizeTargetPosition=False, freq=240, aggregatePhyStep=5, noise=False, mean=0, std_dev=0.1, denoiser='None', measurement_nois
 4
                                                                                                      randomizeDronePosition=False, randomizeTargetPosition=False, freq=240, aggregatePhyStep=5, noise=False, mean=0, std_dev=0.1, denoiser='None', measurement_noise=0.1)
[INFO] BaseAviary.__init__() loaded parameters from the drone's .urdf:
[INFO] INFO] assorated assorat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1000/1000 [08:10<00:00, 2.04it/s]
                                                                                                          EVALUATION STATISTICS
                                                                                                    Success Rate: 69.70%
Collision Rate: 30.30%
Mean Distance to Target: N/A
Mean Reward: 371.06
Minimum Reward: -1766.08
Maximium Reward: -2801.00
Mean Episode Duration: 261.31 steps
Shortest Episode: 1 steps
Longest Episode: 802 steps
                                                                                                      (rl) bhaskar.joshi@gnode060 //DroneControl/SBAgent / noise.e. python EvaluateModel.py
pybullet build time: May 20 2022 19:45:31
Config Data: Namespace(xmin=0, xmax=2, ymin=-0.5, ymax=0.5, zmin=0, zmax=1, useSafetyBounds=True, minObstacles=0, maxObstacles=4, randomizeObstaclesEveryEpis
ode=True, assistlearning=false, lententUntil=100000, fixedAltitude=True, episodeLength=1000, showGeoFence=True, showTrajectory=True, showProximityLines=True,
randomizeDronePosition=False, randomizeTargetPosition=False, freq=240, aggregatePhyStep=5, noise=True, mean=0, std_dev=0.01, denoiser='None', measurement_nois
a=0, 11
 5
                                                                                                  Contegration of the content of the c
                                                                                                          EVALUATION STATISTICS
                                                                                                      Success Rate: 77.00%
Collision Rate: 23.00%
Mean Distance to Target: N/A
Mean Reward: 418.16
Minimum Reward: -1030.13
Maximium Reward: 151.81
Mean Episode Duration: 233.26 steps
Shortest Episode: 325 steps
Longest Episode: 325 steps
                                                                                                      6
                                                                                                    randomizeDronePosition=False, randomizeTargetPosition=False, freq=240, aggregatePhyStep=5, noise=True, mean=0, std_dev=0.01, denoiser='None', measurement_noise=0.1)
[INFO] 8aseAviary__init_() loaded parameters from the drone's .urdf:
[INFO] 8aseAviary__init_() loaded parameters from the drone's .urdf:
[INFO] 1xx 0.000014, lyy 0.000014, izz 0.000022,
[INFO] 1xx 0.000004, lyy 0.000014, izz 0.000022,
[INFO] 1xx 0.2500000, max_speed_kmh 30.0000000,
[INFO] 1gx_2550000, max_speed_kmh 30.0000000,
[INFO] 1gx_2550000, max_speed_kmh 30.0000000,
[INFO] 1gx_gy_coeff 0.0000001, fig. 0.000001,
[INFO] 1gx_gy_coeff 0.0000001, fig. 0.000001,
[INFO] 1gx_gy_coeff 0.0000001, fig. 0.000001,
[INFO] dw_coeff_1 2267.180000, dw_coeff_2 0.1600001,
[INFO] dw_coeff_1 2267.180000, dw_coeff_2 0.1600001,
[INFO] dw_coeff_1 2267.180000, dw_coeff_3 -0.110000
[INFO] dw_coeff_1 2067.180000, dw_coeff_3 -0.110000
[INFO] dw_coe
                                                                                                          EVALUATION STATISTICS
                                                                                                    Success Rate: 69.80%
Collision Rate: 30.20%
Mean Distance to Target: N/A
Mean Reward: 364.95
Minimum Reward: -1991.20
Maximium Reward: 1175.90
Mean Episode Duration: 228.00 steps
Shortest Episode: 1 steps
Longest Episode: 336 steps
```

```
python EvaluateModel.py
pybullet build time: May 20 2022 19:45:31
Config Data: Namespace(xmin=0, xmax=2, ymin=-0.5, ymax=0.5, zmin=0, zmax=1, useSafetyBounds=True, minObstacles=0, maxObstacles=4, randomizeObstaclesEveryEpis
ode=True, assistlearning=False, lenientUntil=100000, fixedAltitude=True, episodeLength=1000, showGeoFence=True, showTrajectory=True, showFroximityLines=True,
randomizeOronePosition=False, randomizeTargetPosition=False, freq=240, aggregatePhyStep=5, noise=True, mean=0, std_dev=0.1, denoiser='None', measurement_noise
=0.1)
[INFO] BaseAviary.__init__() loaded parameters from the drone's .urdf:
[INFO] BaseAviary.__init__() loaded parameters from the drone's .urdf:
[INFO] BaseAviary.__init__() loaded parameters from the drone's .urdf:
[INFO] INFO 120000001, iyy 0.000014, izy 0.000014, izz 0.000002,
[INFO] IX 0.0000004, iyy 0.000014, izz 0.000002,
[INFO] IX 0.0000004, iyy 0.0000014, izz 0.000000,
[INFO] gnd_eff_coeff 11.366590, prop_radius 0.023135,
[INFO] dray_xy_coeff 0.0000014, dray_z_coeff 0.000001,
[INFO] dvc_yzooneff_0.0000014, dray_z_coeff_0.000001,
[INFO] dvc_ooff_1 2267.180000, dv_coeff_2 0.160000, dv_coeff_3 -0.110000
/homez/bhaskar_joshi/miniconda3/envs/rl/lib/python3.9/site-packages/gym/spaces/box.py:73: UserWarning: WARN: Box bound precision lowered by casting to float32
logger.warn(
models/ppo_v5_2d_noise_0.1

100/100 [02:03<00:00, 1.245/it]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 100/100 [02:03<00:00, 1.24s/it]
                                                                                EVALUATION STATISTICS
                                                                             Success Rate: 51.00%
Collision Rate: 29.00%
Mon Distance to Target: 0.77
Mean Reward: -570.73
Minimum Reward: -8122.94
Maximium Reward: 1090.90
Mean Episode Duration: 603.37 steps
Shortest Episode: 1 steps
Longest Episode: 1000 steps
                                                                           8
                                                                              logger.warn(
models/ppo_v5_2d_noise_0.1
100%|
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1000/1000 [18:38<00:00, 1.12s/it]
                                                                                EVALUATION STATISTICS
                                                                             Success Rate: 54.00%
Collision Rate: 31.50%
Mean Distance to Target: 0.86
Mean Reward: -621.83
Minimum Reward: -10740.25
Maximium Reward: 1169.47
Mean Episode Duration: 570.33 steps
Shortest Episode: 1 steps
Longest Episode: 1000 steps
9
                                                                             (rl) bhaskar.joshi@gnode060 //DroncControl/SEAnent // python EvaluateModel.py
pybullet butld time: May 20 2022 19:45:31
config bata: Namespace(xmin=0, xmay=2, ymin=-0.5, ymax=0.5, zmin=0, zmax=1, useSafetyBounds=True, minObstacles=0, maxObstacles=4, randomizeObstaclesEveryEpis
ode=True, assistLearning=False, lenientUntil=100000, fixedAltitude=True, episodeLength=1000, showGeoFence=True, showTrajectory=True, showFroximityLines=True,
randomizeOronePosition=False, randomizeTargetFostiton=False, freq=240, aggregatePhy=5, noise=True, mean=0, std_dev=0.1, denoise="LiPEPbenoise", measuremen
                                                                             randomizeDronePostton=False, randomizeTargetPosition=False, freq=240, aggregatePhyStep=5, noise=True, mean=0, std_dev=0.1, denoiser='LPFDenoiser', measurement_noises-1)
[INFO] BaseAviary__init__() loaded parameters from the drone's .urdf:
[INFO] aggregate_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_Noise_No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 100/100 [01:09<00:00, 1.45it/s]
                                                                                 VALUATION STATISTICS
                                                                             Success Rate: 31.00%
Collision Rate: 69.00%
Mean Distance to Target: N/A
Mean Reward: -301.91
Minimum Reward: -2052.84
Maximium Reward: 1331.96
Mean Episode Duration: 300.00 steps
Shortest Episode: 1 steps
Longest Episode: 586 steps
```

```
(rl) bhaskar joshigonode660 //oroneControl/SEAgent //noise //python EvaluateModel.py
pybullet build time: May 20 2022 19:45:31
Config Data: Namespace(xmine0, xmax=2, ymin=-0.5, ymax=0.5, zmin=0, zmax=1, useSafetyBounds=True, minObstacles=0, maxObstacles=4, randomizeObstaclesEveryEpis
ode=True, assistlearning=False, lenientUntil=100000, fixedAltitude=True, episodeLength=1000, showGeoFence=True, showTrajectory=True, showProximityLines=True,
randomizeOronePostition=False, randomizeTargetPosition=False, freq=240, aggregateThyStep=5, noise=True, mean=0, std_dev=0.1, denoise=r="LPFDenoise=r", measuremen
10
                                                                                   randomizeDronePosition=False, tenientUnttl=100000, fixedAltitude=True, episodeLength=1000, showGeoFence=True, showTrajectory=True, show
                                                                                         Success Rate: 39.40%
Collision Rate: 60.60%
Mean Distance to Target: N/A
Mean Reward: -96.70
Minimum Reward: -2710.91
Maximium Reward: 1398.87
Mean Episode Duration: 326.93 steps
Shortest Episode: 632 steps
Longest Episode: 632 steps
                                                                                       (rl) * bhaskar.joshi@gnode060 */Usonacontrol/SBAsent */moisce** python EvaluateModel.py
pybullet build time: May 20 2022 19:45:31
Config Data: Namespace(xmin=0, xmax=2, ymin=-0.5, ymax=0.5, zmin=0, zmax=1, useSafetyBounds=True, minObstacles=0, maxObstacles=4, randomizeObstaclesEveryEpis
ode=True, assistlearning=False, lenientUntil=100000, fixedAttitude=True, episodeLength=1000, showGeoFence=True, showTrajectory=True, showFroximityLines=True,
randomizeOronePosition=False, randomizeTargetPosition=False, freq=240, aggregatePhyStep=5, noise=True, mean=0, std_dev=0.1, denoiser='LPFDenoiser', measuremen
t_noise=0.1)
[INFO] BaseAviary.__init__() loaded parameters from the drone's .urdf:
[INFO] BaseAviary.__init__() loaded parameters from the drone's .urdf:
[INFO] ixx 0.000014, iyy 0.000014, izz 0.000022,
[INFO] ixx 0.0000014, iyy 0.000014, izz 0.000020,
[INFO] of 0.0000004, im 0.000000,
[INFO] of 0.0000004, im 0.000000,
[INFO] of deff. coeff 1.165590, prop, radius 0.023135,
[INFO] drag xy. coeff 0.000001, drag z.coeff 0.000001,
[INFO] drag coeff 1.2057.1800004, dw.coeff 2.01000004,
home2/bhaskar.joshi/miniconda3/envs/rl/lib/python3.9/site-packages/gym/spaces/box.py:73: UserWarning: WARN: Box bound precision lowered by casting to float32 logger.warn(
models/ppo_v6_lbf_0.1_exp_avg

| 100/100 [01:14<00:00, 1.351t/s]
11
                                                                                         Success Rate: 64.00%
Collision Rate: 36.00%
Monitorian Stance to Target: N/A
Mean Reward: 271.84
Minimum Reward: 2263.47
Maximium Reward: 1408.99
Mean Episode Duration: 344.99 steps
Shortest Episode: 1 steps
Longest Episode: 609 steps
                                                                                12
                                                                                         Success Rate: 62.40%
Collision Rate: 37.60%
Mon Distance to Target: N/A
Mean Reward: 239.67
Minimum Reward: -3369.90
Maximium Reward: 1408.99
Mean Episode Duration: 366.64 steps
Shortest Episode: 1 steps
Longest Episode: 647 steps
```

```
13
                                                                                                              EVALUATION STATISTICS
                                                                                                          Success Rate: 63.00%
Collision Rate: 37,00%
Mean Distance to Target: N/A
Mean Reward: 390.85
Minimum Reward: -1592.19
Maximium Reward: 1174.98
Mean Episode Duration: 223.57 steps
Shortest Episode: 1 steps
Longest Episode: 334 steps
                                                                                                 (rt) * bhaskar.joshi@gnode868 //Orom.control/Silncol // Photse : python EvaluateModel.py
pybullet build time: May 20 2022 19:45:31
Config Data: Namespace(xmin=0, xmax=2, ymin=-0.5, ymax=0.5, zmin=0, zmax=1, useSafetyBounds=True, minObstacles=0, maxObstacles=4, randomizeObstaclesEveryEpis
ode=True, assistLearning=False, lenientIntil=100000, fixedAltitude=True, episodeLength=1000, showGeoFence=True, showTrajectory=True, showProximityLines=True,
randomizeDornePosition=False, randomizeTargetPosition=False, freq=240, aggregatePhyStep=5, noise=True, mean=0, std_dev=0.1, denoiser='KFDenoiser', measurement
noise=0.1
[INFO] BaseAviary__init_() loaded parameters from the drone's .urdf:
[INFO] m 0.027000, L 0.039700,
[INFO] ix 0.0809014, ty 0.0809014, iz z 0.080012,
[INFO] ix 0.0809014, ty 0.0809014, iz z 0.080012,
[INFO] ix 0.080900, km 0.090000,
[INFO] ix 0.080900, km 0.090000,
[INFO] drag_xy_coeff 0.090001, drag_z_coeff 0.090001,
[INFO] drag_xy_coeff 0.090001,
[INFO] drag_xy_coeff 0.090001,
[INFO] drag_xy_coeff 0.090001,
[INFO] drag_xy_xy_xy_xy_xy_xy_xy_xy_xy_xy_xy_
14
                                                                                                                EVALUATION STATISTICS
                                                                                                          Success Rate: 60.60%
Collision Rate: 39.40%
Mean Distance to Target: N/A
Mean Reward: 304.61
Minimum Reward: -1709.45
Maximium Reward: 1174.98
Mean Episode Duration: 230.91 steps
Shortest Episode: 1 steps
Longest Episode: 340 steps
                                                                                                 (rl) * bhaskar.joshi@gnode060 ***OromeControl/SBAgent * noise *** python EvaluateModel.py
pybullet build time: May 20 2022 19:45:31
Config Data: Namespace(xmin=0, xmax=2, ymin=-0.5, ymax=0.5, zmin=0, zmax=1, useSafetyBounds=True, minObstacles=0, maxObstacles=4, randomizeObstaclesEveryEpis
od==True, assistLearning=False, lenientUntil=100000, fixedAltitude=True, episodeLength=1000, showGeoFence=True, showTrajectory=True, showProximityLines=True,
randomizeDornePosition=False, randomizeTargetPosition=False, freq=240, aggregatePhyStep=5, noise=True, mean=0, std_dev=0.1, denoiser='KFDenoiser', measurement
__noise=0.1)
[INFO] BaseAviary.__init_ () loaded parameters from the drone's .urdf:
[INFO] baseAviary.__init_ () loaded parameters from the drone's .urdf:
[INFO] ix 0.000001, iv 0.000014, izz 0.000014, izz 0.000012,
[INFO] ix 0.0000014, iy 0.000014, izz 0.000012,
[INFO] baseAviary.__posed_kmh 30.000000,
[INFO] two 0.0000014, izz 0.000014, izz 0.000012,
[INFO] drone=0.0000014, izz 0.0000014, izz 0.000015,
[INFO] drone=0.0000014, izz 0.0000014, izz 0.000016,
[INFO] drone=0.0000014, izz 0.0000014,
[INFO] drone=0.0000014,
[INFO] drone=0.
15
                                                                                                              EVALUATION STATISTICS
                                                                                                          Success Rate: 50.00%
Collision Rate: 50.00%
Collision Rate: 50.00%
Mean Distance to Target: N/A
Mean Reward: 135.78
Minimum Reward: -1861.09
Maximium Reward: 1147.90
Mean Episode Duration: 222.27 steps
Shortest Episode: 1 steps
Longest Episode: 337 steps
```

```
16
                                           logger.warn(
odels/ppo_v6_kf_not_so_good
                                                                                                                                                                                                                                                                                                                                                                                                                  | 1000/1000 [08:49<00:00, 1.89it/s]
                                             EVALUATION STATISTICS
                                           Success Rate: 64.80%
Collision Rate: 35.20%
Mean Distance to Target: N/A
Mean Reward: 377.24
Minimum Reward: -1861.09
Maximium Reward: 1260.72
Mean Episode Duration: 238.51 steps
Shortest Episode: 1 steps
Longest Episode: 339 steps
                                          pythole to build time: May 20 2022 19:45:31

Config Data: Namespace(xmin=0, xmax=2, ymin=-0.5, ymax=0.5, zmin=0, zmax=1, useSafetyBounds=True, minObstacles=0, maxObstacles=4, randomizeObstaclesEveryEpis ode=True, assistlearning=False, lenentUntil=100000, fixedAltitude=True, episodeLength=1000, showGeoFence=True, showTrajectory=True, showProximityLines=True, randomizeOronePosition=False, rendomizeTargetPosition=False, freq=240, aggregatePhyStep=5, noise=True, mean=0, std_dev=0.1, denoiser='KFDenoiser', measurement noise=0.1)

[INFO] BaseAviary.__init__() loaded parameters from the drone's .urdf:

[INFO] m 0.027000, L 0.039700, [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.039700], [10.0397
17
                                                                                                                                                                                                                                                                                                                                                                                                                             | 100/100 [00:54<00:00, 1.82it/s]
                                              EVALUATION STATISTICS
                                           Success Rate: 60.00%
Collision Rate: 40.00%
Mean Distance to Target: N/A
Mean Reward: 331.11
Minimum Reward: -2007.43
Maximium Reward: 1181.35
Mean Episode Duration: 241.45 steps
Shortest Episode: 1 steps
Longest Episode: 337 steps
                                          18
                                                      ogger.warn(
els/ppo_v6_kf_not_so_good_seed=5
                                                                                                                                                                                                                                                                                                                                                                                                                 | 1000/1000 [08:55<00:00. 1.87it/s]
                                             EVALUATION STATISTICS
                                           Success Rate: 64.10%
Collision Rate: 35.90%
Mean Distance to Target: N/A
Mean Reward: 338.90
Minimum Reward: -2189.20
Maximium Reward: 1188.11
Mean Episode Duration: 238.91 steps
Shortest Episode: 1 steps
Longest Episode: 344 steps
```