Reconstructing Trajectories

April 18, 2020

0.1 Raw Input Data

The data you'll be working with has been preprocessed from CSVs that looks like this:

timestamp	displacement	yaw_rate	acceleration
0.0	0	0.0	0.0
0.25	0.0	0.0	19.6
0.5	1.225	0.0	19.6
0.75	3.675	0.0	19.6
1.0	7.35	0.0	19.6
1.25	12.25	0.0	0.0
1.5	17.15	-2.82901631903	0.0
1.75	22.05	-2.82901631903	0.0
2.0	26.95	-2.82901631903	0.0
2.25	31.85	-2.82901631903	0.0
2.5	36.75	-2.82901631903	0.0
2.75	41.65	-2.82901631903	0.0
3.0	46.55	-2.82901631903	0.0
3.25	51.45	-2.82901631903	0.0
3.5	56.35	-2.82901631903	0.0

This data is currently saved in a file called `trajectory_example.pickle`. It can be loaded using a helper function we've provided (demonstrated below):

```
In [1]: from helpers import process_data
        %matplotlib inline

        data_list = process_data("trajectory_example.pickle")

        for entry in data_list:
            print(entry)
```

```
(0.0, 0, 0.0, 0.0)
(0.25, 0.0, 0.0, 19.600000000000001)
(0.5, 1.2250000000000001, 0.0, 19.600000000000001)
(0.75, 3.6750000000000003, 0.0, 19.600000000000001)
(1.0, 7.3500000000000005, 0.0, 19.600000000000001)
```