

Date	Hours	Type	Description
10/13/2020	2	R	Spent time digging into specifics of kalman filter
10/14/2929	2	R	Derived extended kalman filter to understand where shortcomings are
10/28/2020	3	D	Began setting up dataset generation, spent extra time to "jit" to be able to generate LOTS of data FAST
10/30/2020	3	D	Got EKF, UKF, PF all set up for systems. Can use any at this point to generate data.
11/11/2020	1	D	Generated data for simple odometry example using PF. Took ~2.5hrs to generate ~2million datapoints
11/11/2020	1	N	Outline all variations of networks to try, and set up gameplan for exactly what inputs/outputs are
11/13/2020	2	N	Tried various inputs for Predict_Sigma network
11/14/20	3	N	Tried changing architecture some for Predict_Sigma network
11/16/2020	2	N	Finished setting up dataloader class for other 2 networks
11/16/2020	1	N	Finished setting up network for Update_Mu and Update_Sigma
11/17/2020	2	N	Start setting up all training - each network seperately along with one that iterates through them all
12/1/2020	3	N	Improved training together sequence - each trajectory has 200 pts, does n trajectories at a time to leverage GPU
12/2/2020	1	N	Investigate/solve NaNs when not using teacher forcing.
12/4/2020	1	N	Figured out NaN problem, but now UpdateMu ALWAYS returns same value, even before training.
12/7/2020	1	N	UpdateMu (and all networks) were too deep, had to reduce depth to get to train better. (Alternate fix - residuals)
12/7/2020	1	N	Got it working! Did a little normalization by hand to get it to work.
12/8/2020	1.5	N	Did better normalization, works even better now. Sigma is predicting way off though.
12/8/2020	0.5	N	Fixed UpdateSigma not working well
12/9/2020	1	D	Modified data simulator to track higher order moments
12/9/2020	1.5	N	Moved onto doing higher moments, cleaned all network code EVERYTHING as I shifted for it.
12/9/2020	0.5	N	Tried ResNets, they train MUCH better

Key	ACTIVITY TYPES		MY TOTAL	CLIPPED TOTAL	CATEGORY MAX
R	Researching	R	4	4	5
D	Dataset Prep	D	8	8	10
N	Coding Networks	N	22	22	1000
Total			34	34 Allowable Total	