Extended Kalman Filters

Compiling:

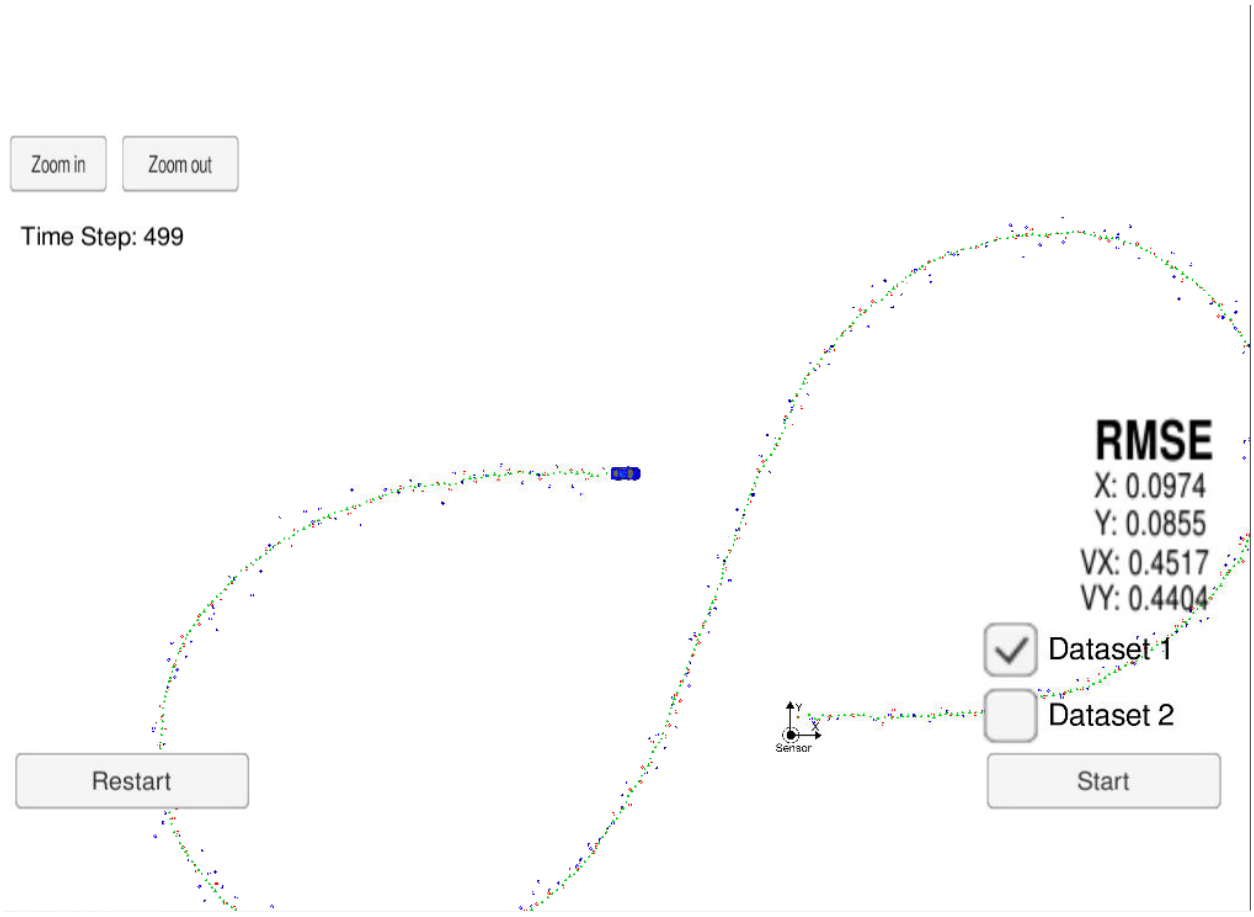
Your code should compile:

On the workspace provided by Udacity my code was compiling successfully.

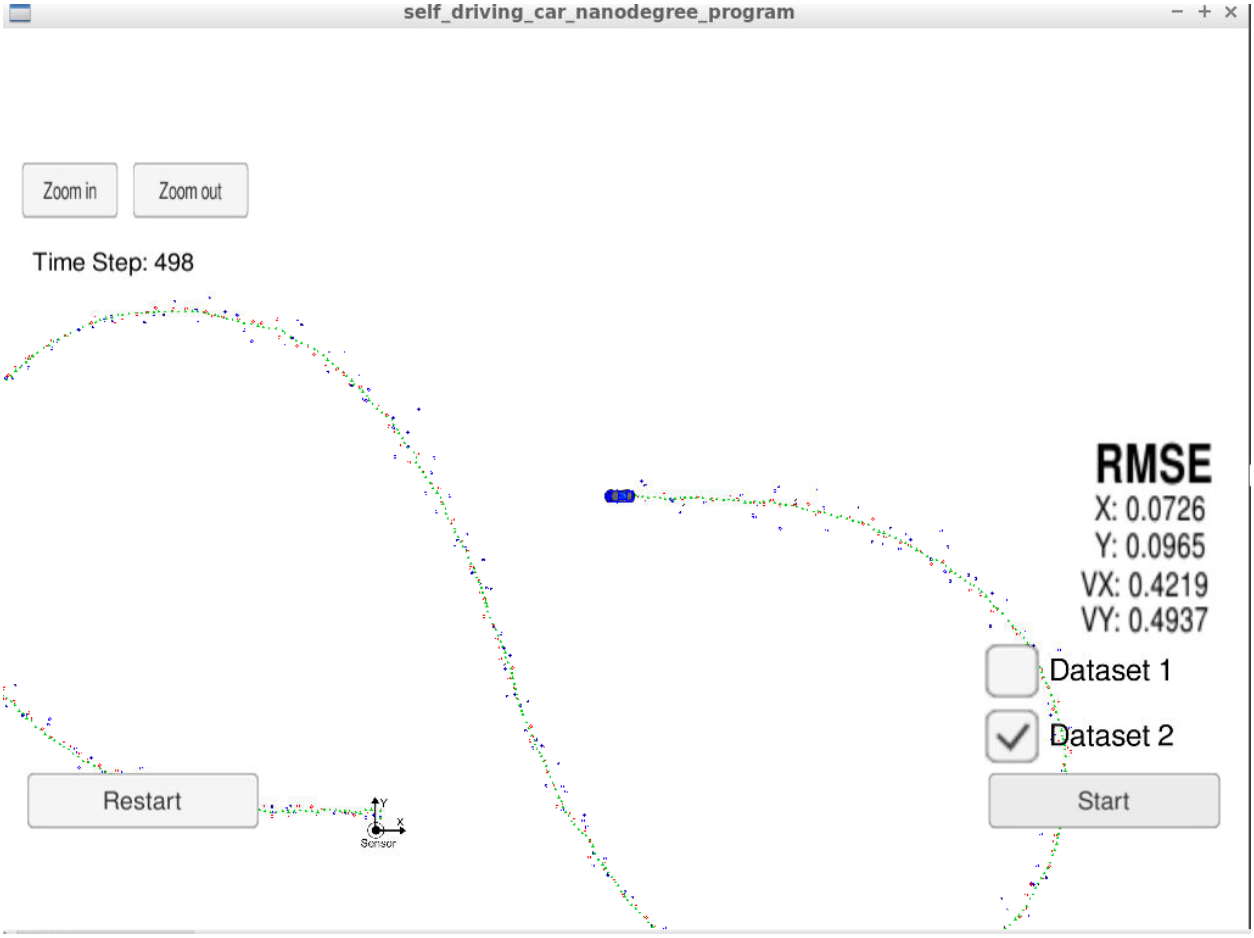
Accuracy:

px, py, vx, vy output coordinates must have an RMSE <= [.11, .11, 0.52, 0.52] when using the file: "obj_pose-laser-radar-synthetic-input.txt" which is the same data file the simulator uses for Dataset 1.

After running code on the simulator here is the screenshot for running code on dataset1,



And also screenshot for running code on dataset2,



Follows the Correct Algorithm:

- **Your Sensor Fusion algorithm follows the general processing flow as taught in the preceding lessons.**
  Yes, I have followed general process flow as taught in classroom lessons.

- **Your Kalman Filter algorithm handles the first measurements appropriately.**
  Yes, It does.

- **Your Kalman Filter algorithm first predicts then updates.**
  Yes, Algorithm first predict and then updates as per general flow of Kalman filter.

- **Your Kalman Filter can handle radar and LIDAR measurements.:**
  Yes, I have written this code to handle radar and LIDAR measurements

Code Efficiency:

Your algorithm should avoid unnecessary calculations.
As per my knowledge, I have avoided unnecessary calculations.

Challenges:

Understanding this Algorithm:

Earlier I was not able to understand Algorithm of Kalman Filter but after investing few days on this algorithm by reading few articles and videos, I could understand it.

In Coding:

In this project we have only few code changes, but troubleshooting minor mistakes in the writing algorithm consumed much of my time because of that I have to go through video tutorials again to understand the problem.