README for "Interactive multiple model ensemble Kalman filter for traffic estimation and incident detection".

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Abstract

This document describes the implementation of the Interactive multiple model (IMM) ensemble Kalman filter(EnKF) introduced in the article 'Interactive multiple model ensemble Kalman filter for traffic estimation and incident detection" by Wang and Work, submitted to the IEEE Transaction on Intelligent Transportation Systems Conference A preprint of the article is available for download on the second author's website. The source code is hosted at `https://github.com/renwang/IMM_EnKF_Traffic_Estimation_Incident_Detection`.

1 License

2 Running the code

The provided .py files can be used to reproduce the results presented in the publication.

1. Generate figure two and figure three (a),(c) two by running

   `IMM_EnKF.py`

2. Generate figure three (b), (d) by running

   `MM_EnKF.py`

The simulation results for different probe headways can be obtained by changing the self.PR value in the GPSvehicle class