

Traineeship Approach: Lineal Detection of “point merge” traffic patterns

Author Ferran Dalmau Codina¹

^{*} Pompeu Fabra University (Barcelona)

Compiled December 15, 2019

1. MOTIVATION

I've done a quick approach to see how feasible is to detect merge point traffic patterns with just linear Machine learning and Statistics Methods.

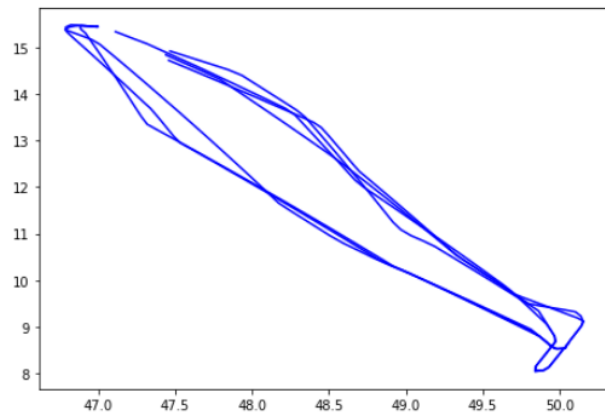


Fig. 1. Dataset with 7 trajectories.

To start with I download flight paths from **Flight Radar 24** from an airport with **icao24** = 4400c3. It's an small data set of 7 flights but to test if it's feasible it's fine.

2. APPROACH

After applying linear machine learning and statistic methods and clustering with $k = 2$ i archive the following result.

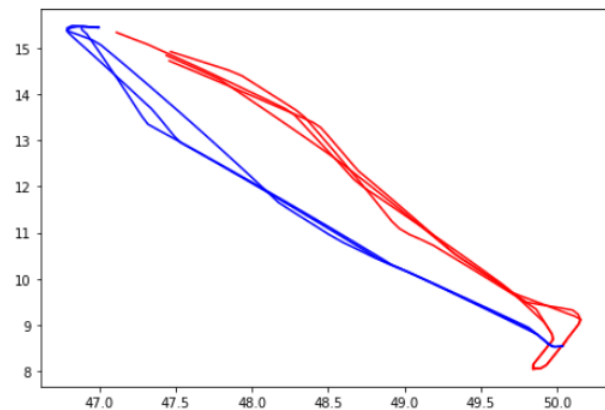


Fig. 2. Results with $k = 2$

If we look at the results of the figure 2 we can observe that the results archived are pretty successful, and is capable to find the trajectory patterns.

3. FUTURE WORK

This simple method will be even capable to find point merge patterns, but to make it more robust and for a worldwide implementation i would suggest non-linear methods, that will improve the traffic pattern detection.