

# PFLOCK Report

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# Outline

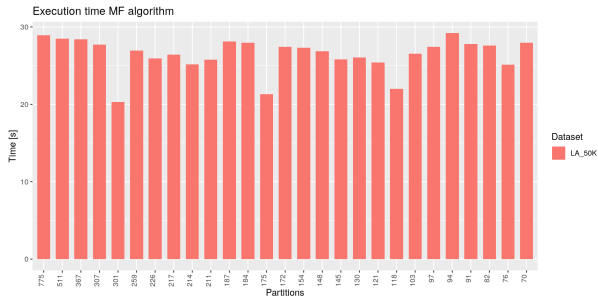
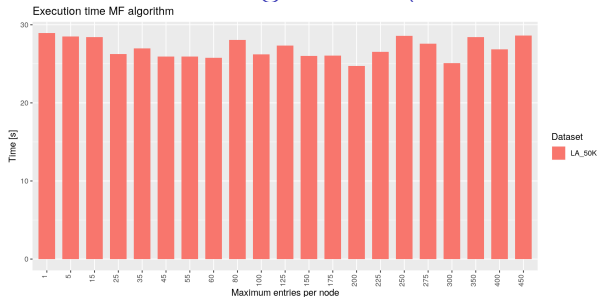
Extended test on MF Algorithm

Debugging FF Algorithm and initial tests

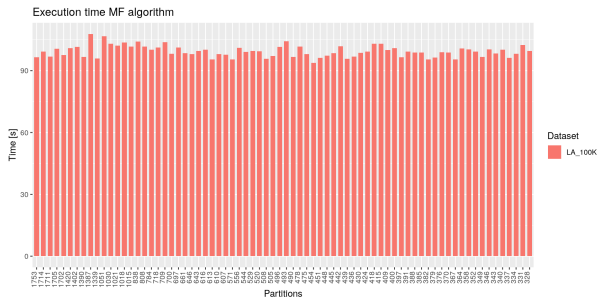
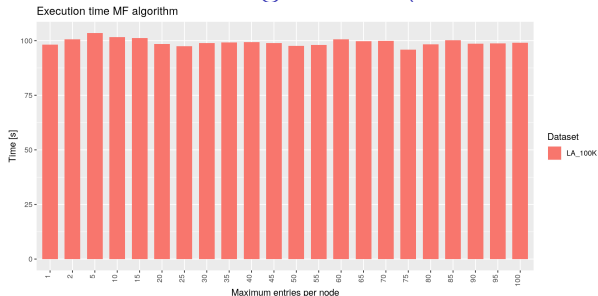
## Extended tests on MF Algorithm

- ▶ Some confusing results in LA\_50K and LA\_100K (maybe due to skew data).
- ▶ Using uniform dataset to find some pattern.
- ▶ Quadtree not always generate the same number of partitions even if the same **MaxEntries** is used.

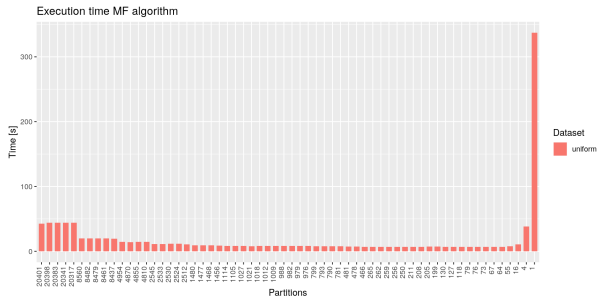
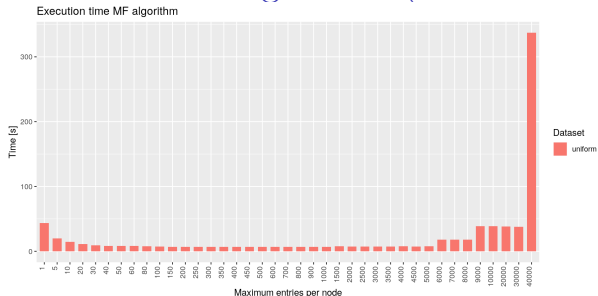
# Extended tests on MF Algorithm (LA\_50K dataset)



# Extended tests on MF Algorithm (LA\_100K dataset)



# Extended tests on MF Algorithm (Uniform dataset)



# Outline

Extended test on MF Algorithm

Debugging FF Algorithm and initial tests

## Some remarks (debugging the code)

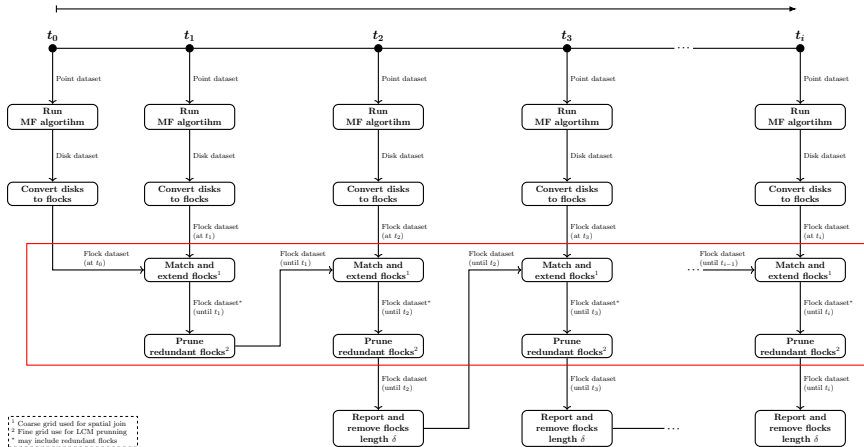
- ▶ Fixing some issues with the performance in larger datasets.
- ▶ Join between time intervals works fine with default settings.
- ▶ We need an additional pruning<sup>1</sup> after the join of time intervals but data size is much smaller than expected.
- ▶ However it still requires to tune its parameters.
- ▶ It has been difficult to set the parameters for each partitioner.

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<sup>1</sup>We can use same LCM strategy than in MF algorithm



# Some remarks (debugging the code)



## Some remarks (about the partitioners)

- ▶ The size of the sample also plays a role on how to tune the Quadtree and the partitioner.
- ▶ I have implemented an strategy to infer the size of the sample depending on the size of the dataset.
- ▶ Overall initial tests run well up to time interval 40 ( $\approx 60K$  trajectories per time interval).

## Some challenges (about the current scenario)

- ▶ It is clear that in this scenario (number of trajectories increases along time intervals), a fix setting of parameters will not work for all the cases.
- ▶ I have been working on a strategy to dynamically adjust the parameters but I am still on that.
- ▶ It should be useful to work with a more stable dataset to test the implementation and then explore the dynamic setting.