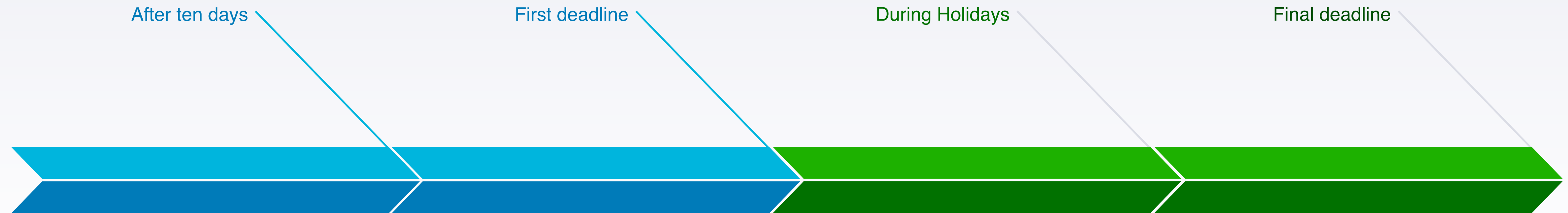


POLIMI RECSYS CHALLENGE 2020

- Pisa Arcangelo
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Our journey



Trial & Error

- CF / CBF
- P3Alpha + Rp3Beta
- SLIM Elastic Net
- PureSVD
- IALS
- P3Alpha + ItemKNN
- Many other Hybrids

Split in two category

We obtained two models that worked differently for users with just one interaction and users with more than one interactions

Get more power

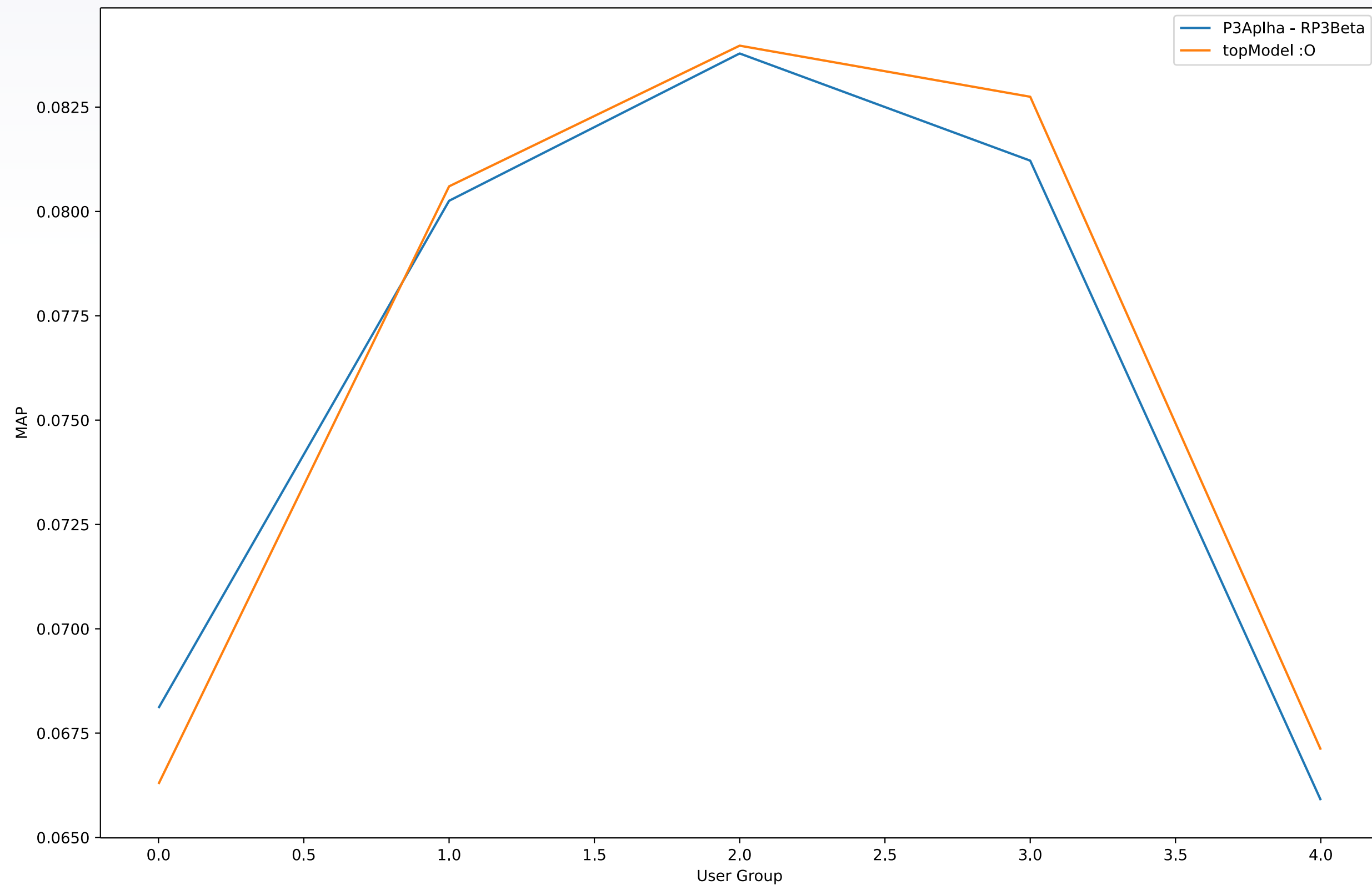
We started to use VM on Colab, Google Cloud Platform and Kaggle to improve our tuning phase

Feature Merging

We used feature merging to tune the final hybrid with three different algorithms: Matrix Factorization (IALS), Graph Based (RP3Beta) and ML based (Elastic Net)

First deadline

Here we tuned this two model for different categories and then we noticed that they performed differently on such categories.



First category: users with one interaction

**ItemKNNSimilarityHybridRecommender:
P3Alpha + RP3Beta**

Second category: all the others

**ItemKNNScoresHybridRecommender:
RP3Beta + P3Alpha + UserKNN + SVD**

Second deadline

**Feature Merging
of URM and ICM
Crossvalidation**

+

**ItemKNNScores
Hybrid with
IALS + RP3Beta
+ SLIM Elastic
Net**