

## **Problem Set 13, Dec 14, 2021**

### **(Matrix Factorizations and Recommender Systems)**

**Goals.** The goal of this exercise is to

- Build a recommender system.
- Learn to evaluate its performance.
- Implement and understand matrix factorization using SGD.
- Implement and understand the alternating least-squares (ALS) algorithm.

**Setup, data and sample code.** Obtain the folder `labs/ex13` of the course github repository

[github.com/epfml/ML\\_course/tree/master/labs/ex13](https://github.com/epfml/ML_course/tree/master/labs/ex13)

You can also the notebook in Google Colab:

[colab.research.google.com/github/epfml/ML\\_course/tree/master/labs/ex13/template/ex13.ipynb](https://colab.research.google.com/github/epfml/ML_course/tree/master/labs/ex13/template/ex13.ipynb)

## **1 Notebook**

The notebook guides you through data preparation, the design of baselines, and the implementation and training of a Matrix Factorization algorithm for recommendation.