Labs **Machine Learning Course**Fall 2023

## **EPFL**

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www.epfl.ch/labs/mlo/machine-learning-cs-433

## Problem Set 12, Dec 7, 2023 (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/ex12 of the course github repository

github.com/epfml/ML\_course/tree/master/labs/ex12

You can also the notebook in Google Colab:

colab.research.google.com/github/epfml/ML\_course/tree/master/labs/ex12/template/ex12.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.