Datasets:
- movielens
- last.fm
- cliff news (no users)

Note:
- we can only learn patterns if it repeats multiple times in the data,
e.g. we need several years to learn a yearly pattern.
- don't forget users can only give one rating often.
- pick timesteps according to dataset (hour/day/week/month,etc.)

Experimental setup 1: user modelling
- uses the real observed user data

Task: achieve an accurate model of the user
Evaluation: predict unobserved user interactions

Baselines: models that ignore time

Experimental setup 2: recommendation quality
- semi-synthetic half real/half simulation

1. Assume a model of user behavior
- e.g. Prob. of observance, prob. of rating, depending on time of year, age of item
2. Fit this model on observed data, simulation model
3. simulation model to generate data, for training
4. use simulation model to evaluate final recsys