

Evaluation & Submission

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Metric

- the average precision at n for this user is
- $ap@n = \sum_{k=1, \dots, n} P(k) / (\text{number of items clicked in } m \text{ items})$
- where if the denominator is zero, the result is set zero;
- $P(k) = (\text{k번째 item을 클릭했을 때 k번째 까지 클릭한 item의 수})/k$
- $P(k)$ equals 0 when k -th item is not followed upon recommendation;
- $n = 3$ as this is the default number of items recommended to each user in our recommender system.
- For example,
- User #1 에게 5개의 item이 추천됨. #1, #3, #4를 클릭함 $ap@3 = (1/1 + 2/3)/3 \approx 0.56$
- User #1 에게 4개의 item이 추천됨. #1, #2, #4를 클릭함 $ap@3 = (1/1 + 2/2)/3 \approx 0.67$
- User #1 에게 3개의 item이 추천됨. #1, #3를 클릭함 $ap@3 = (1/1 + 2/3)/2 \approx 0.83$
- The average precision for N users at position n is the average of the average precision of each user, i.e.,
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- $AP@n = \sum_{i=1, \dots, N} ap@ni / N$
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- which is exactly the metric for the result file that the teams submit for evaluation of their models.

Submission Instructions

- The goal is to predict which items that were recommended to the user were followed by the user, within each set
- Set 1: timestamp < 1321891200
- Set 2: timestamp >= 1321891200
- the first column contains the user id (and is sorted by user id, within the public leaderboard set and the final evaluation set). The second column contains between 0 and 3 space-separated ids for recommended users or items to follow (for example "647356 458026 1606609").

Submission Instructions

1. Test set에서 Timestamp를 기준으로 일단 Set1, Set2를 다 뽑음
2. Set1의 결과를 output file에 넣고 그 다음 Set2를 이어 붙임
3. 각 Set에 대해서 아래 과정을 수행
 1. libFM test결과 나온 값들 0~1사이에 있는 값에서 특정 유저에 대해 큰 값을 가지는 item을 차례로 3개 고름
 2. 각 user에 대해서 고른 3개의 item id를 써줌(user는 오름차순)

make_submitformat.py

-My code

- Input: libfm test output 파일
- Output:
 - UserID, Prob가 높은 상위 3개 recommended items.
- Command:
 - `python make_submitformat.py [libfm output filename] [test filename] [output filename]`
- 느림! 32G Ram server에서 돌리는데 1시간 반 정도 소요