

Experiment3: IR Evaluation

← → ↺ ↻ 🔒 <https://trec.nist.gov/data/microblog/2014/qrels2014.txt>

```
171 Q0 298900309307790400 0
171 Q0 307127843299672065 0
171 Q0 298458573476855809 0
171 Q0 300346471650312194 0
171 Q0 300009048252747776 0
171 Q0 307360182604820481 2
171 Q0 307575501373992961 2
171 Q0 307585630601371648 2
171 Q0 307592941277433856 2
171 Q0 307462808801513472 2
171 Q0 307581469876944897 2
171 Q0 307380759835062272 2
171 Q0 307296328499724288 2
171 Q0 307390255743528960 2
171 Q0 307431003394281472 2
171 Q0 297987456635117569 0
171 Q0 307496547812270080 2
```

← → ↺ ↻ 🔒 安全 <https://trec.nist.gov/data/microblog/2014/topics.desc.MB171-225.txt>

```
<top>
<num> Number: MB171 </num>
<query> Ron Weasley birthday </query>
<querytime> Sat Mar 02 10:43:45 EST 2013 </querytime>
<querytweettime> 307878904759201794 </querytweettime>
<querydescription>
Find tweets regarding the birthday of fictional character Ron Weasley, Harry Potter's sidekick.
</querydescription>
</top>
```

```
<top>
<num> Number: MB172 </num>
<query> Merging of US Air and American </query>
<querytime> Sun Feb 17 16:14:40 EST 2013 </querytime>
<querytweettime> 303251140382973952 </querytweettime>
<querydescription>
Find information on the merger of US Airways and American airlines.
</querydescription>
</top>
```



<https://trec.nist.gov/data/microblog/2014/qrels2014.txt>







```
tweets.txt
1 {"userName": "Mariah Peoples", "clusterNo": 82, "text": "House
may kill Arizona-style immigration bill, Rep. Rick Rand says:
The House is unlikely to pass the \"Ari...
http://tinyurl.com/4irjcdz", "timeStr": "Sun Jan 23 00:02:37
+0000 2011", "tweetId": "28965792812892160", "errorCode": "200",
"textCleaned": " ", "relevance": 2}
2 {"userName": "servando", "clusterNo": 35, "text": "Mourners
recall Sarge Shriver's charity, idealism \n (AP): AP - R.
Sargent Shriver was always an optimist, pio...
http://bit.ly/gqMcdG", "timeStr": "Sun Jan 23 00:07:48 +0000
2011", "tweetId": "28967095878287360", "errorCode": "200",
"textCleaned": " ", "relevance": 1}
3 {"userName": "Heide Eversoll", "clusterNo": 60, "text": "Bass
Fishing Techniques: 2 Fantastic Tips To Improve Your Casting
Skills", "timeStr": "Sun Jan 23 00:10:05 +0000 2011", "tweetId":
"28967672074993664", "errorCode": "200", "textCleaned": " ",
"relevance": 2}
```

Experiment3: IR Evaluation

实现以下指标评价，并对Experiment2的检索结果进行评价

- Mean Average Precision (MAP)
- Mean Reciprocal Rank (MRR)
- Normalized Discounted Cumulative Gain (NDCG)

D:) > Teaching > IR-DM 2020秋季 > Experiment3_Evaluation

名称	修改日期	类型	大小
 evaluation.py	2020/9/29 7:55	JetBrains PyChar...	2 KB
 process.py	2020/9/29 7:58	JetBrains PyChar...	2 KB
 qrels.txt	2018/11/7 13:39	文本文档	264 KB
 qrels2014.txt	2020/9/29 8:01	文本文档	1,586 KB
 readme.txt	2018/11/7 19:06	文本文档	1 KB
 result.txt	2018/11/7 18:39	文本文档	219 KB

Deadline: 2021.12.8

```
#def MAP_eval(qrels_dict, test_dict, k = 100):

#def MRR_eval(qrels_dict, test_dict, k = 100):

#def NDCG_eval(qrels_dict, test_dict, k = 100):

def evaluation():
    k = 100
    # query relevance file
    file_qrels_path = 'qrels.txt'
    # qrels_dict = {query_id:{doc_id:gain, doc_id:gain, ...}, ...}
    qrels_dict = generate_tweetid_gain(file_qrels_path)
    # ur result, format is in function read_tweetid_test, or u can write by ur own
    file_test_path = 'result.txt'
    # test_dict = {query_id:[doc_id, doc_id, ...], ...}
    test_dict = read_tweetid_test(file_test_path)
    MAP = MAP_eval(qrels_dict, test_dict, k)
    print('MAP', ' = ', MAP, sep='')
    MRR = MRR_eval(qrels_dict, test_dict, k)
    print('MRR', ' = ', MRR, sep='')
    NDCG = NDCG_eval(qrels_dict, test_dict, k)
    print('NDCG', ' = ', NDCG, sep='')

if __name__ == '__main__':
    evaluation()
```