Triplet Judgments using Mechanical Turk

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1. INTRODUCTION

The various steps involved are as follows:

- Document Pooling
- Generate and Sample triplets
- Create HITs
- Submit HITs

2. DOCUMENT POOLING

The *evalIR* package has a function to pool documents at a specified depth given a list of runs in TREC format.

```
library(evalIR, quietly=T)
library(plyr)
source('../amtStudy.R')
runFiles <- list.files(path='../../../demo/data/diversity/trec2009',
                       full.names=T)
runIDs <- basename(runFiles)
pooling_depth <- 5
runs <- read.runs(runPaths= runFiles, runids= runIDs, limit= 5)
# Document Pooling
pooled_docs <- adply(runs$getQueries(), 1, pool.documents,
                     runs, pooling_depth)
head(pooled_docs, n=5)
```

```
##   X1                     query
## 1  1 clueweb09-en0001-02-21652
## 2  1 clueweb09-en0010-57-32918
## 3  1 clueweb09-en0010-79-02218
## 4  1 clueweb09-en0010-93-11767
## 5  1 clueweb09-en0025-89-06994
```

3. GENERATE AND SAMPLE TRIPLETS

Gereate all possible triplets, assign triplet IDs to the triplets and store them in a folder. Accessing these triplet files perform uniform random sampling to pick 100 triplets and keep track of the triplet IDs picked for judgment in another folder. Note: The number of Triplets being sampled must be sampled as multiple of 4 due to the fact that a HIT contains four legal and one trap triplet.

4. GENERATE HITS

A HIT consists of five different triplets, of which one is a trap. There are two different kinds of trap: identical and irrelevant trap. At this step every four sampled triplet is combined with a trap to form a HIT. The HITs dataframe for each query is stored in the 'HIT' folder.

5. SUBMIT HITS

MTurkR can be used to automatically submit jobs from R to Amazon Mechanical Turk.