

Your Name:

Your Andrew ID:

Homework 4

0 Introduction

0.1 Collaboration and Originality

1. Did you receive help of any kind from anyone (other than the instructor or TAs) in developing your software for this assignment (Yes or No)? If you answered Yes, provide the name(s) of anyone who provided help, and describe the type of help that you received.
2. Did you give help of any kind to anyone in developing their software for this assignment (Yes or No)? If you answered Yes, provide the name(s) of anyone that you helped, and describe the type of help that you provided.
3. Did you examine anyone else's software for this assignment (Yes or No)? Do not describe software provided by the instructor.
4. Are you (or the course instructor) the author of every line of source code submitted for this assignment (Yes or No)? If you answered No:
 - a. identify the software that you did not write,
 - b. explain where it came from, and
 - c. explain why you used it.
5. Are you the author of every word of your report (Yes or No)? If you answered No:
 - a. identify the text that you did not write,
 - b. explain where it came from, and
 - c. explain why you used it.

0.2 Instructions

Some experiments require you to set parameters or weights. You must explain why you chose particular values, and how your choices relate to how the technique works. We look for good experimental design – parameters that explore interesting issues or hypotheses (even if the hypothesis turns out to be wrong).

Leave the page breaks between sections, as shown in this file. This will reduce the number of duplicate pages in your graded report.

Instructions are shown in a red italic bold font. Do not include instructions in your report. For example, delete this page. There is a 2 point deduction for leaving instructions in your report (because it creates extra work for the TAs).

1 Experiment: Effect of Reranking Depth

1.1 Parameters for Reranking Depth Experiment

Briefly describe the parameter settings that were used in the reranking depth experiment.

1.2 Experimental Results for Reranking Depth

Your .zip / .tgz file must include files named HW4-Exp-1.1a.qry, HW4-Exp-1.1a.param, etc., in the QryEval directory. The experimental results shown above must be reproducible by these files and the parameter values shown in the table.

	BM25 (Exp-1.1a)	Coordinate Ascent Reranking Depth		
		100 (Exp-1.1b)	250 (Exp-1.1c)	500 (Exp-1.1d)
MRR@k	0.0000	0.0000	0.0000	0.0000
P@10	0.0000	0.0000	0.0000	0.0000
P@20	0.0000	0.0000	0.0000	0.0000
P@30	0.0000	0.0000	0.0000	0.0000
NDCG@10	0.0000	0.0000	0.0000	0.0000
NDCG@20	0.0000	0.0000	0.0000	0.0000
NDCG@30	0.0000	0.0000	0.0000	0.0000
R@100	0.0000	0.0000	0.0000	0.0000
R@500	0.0000	0.0000	0.0000	0.0000
R@1000	0.0000	0.0000	0.0000	0.0000
MAP	0.0000	0.0000	0.0000	0.0000
mm:ss	00:00	00:00	00:00	00:00

	BM25 (n/a)	ListNet Reranking Depth		
		100 (Exp-1.2b)	250 (Exp-1.2c)	500 (Exp-1.2d)
MRR@k	0.0000	0.0000	0.0000	0.0000
P@10	0.0000	0.0000	0.0000	0.0000
P@20	0.0000	0.0000	0.0000	0.0000
P@30	0.0000	0.0000	0.0000	0.0000
NDCG@10	0.0000	0.0000	0.0000	0.0000
NDCG@20	0.0000	0.0000	0.0000	0.0000
NDCG@30	0.0000	0.0000	0.0000	0.0000
R@100	0.0000	0.0000	0.0000	0.0000
R@500	0.0000	0.0000	0.0000	0.0000
R@1000	0.0000	0.0000	0.0000	0.0000
MAP	0.0000	0.0000	0.0000	0.0000
mm:ss	00:00	00:00	00:00	00:00

	BM25 (n/a)	Coordinate Ascent Reranking Depth	BERT, 6 layers Reranking Depth		
		500 (n/a)	100 (Exp-1.3b)	250 (Exp-1.3c)	500 (Exp-1.3d)
MRR@k	0.0000	0.0000	0.0000	0.0000	0.0000
P@10	0.0000	0.0000	0.0000	0.0000	0.0000
P@20	0.0000	0.0000	0.0000	0.0000	0.0000
P@30	0.0000	0.0000	0.0000	0.0000	0.0000
NDCG@10	0.0000	0.0000	0.0000	0.0000	0.0000
NDCG@20	0.0000	0.0000	0.0000	0.0000	0.0000
NDCG@30	0.0000	0.0000	0.0000	0.0000	0.0000
R@100	0.0000	0.0000	0.0000	0.0000	0.0000
R@500	0.0000	0.0000	0.0000	0.0000	0.0000
R@1000	0.0000	0.0000	0.0000	0.0000	0.0000
MAP	0.0000	0.0000	0.0000	0.0000	0.0000
mm:ss	00:00	00:00	00:00	00:00	00:00

	BM25 (n/a)	Coordinate Ascent Reranking Depth	BERT, 12 layers Reranking Depth		
		500 (n/a)	100 (Exp-1.4b)	250 (Exp-1.4c)	500 (Exp-1.4d)
MRR@k	0.0000	0.0000	0.0000	0.0000	0.0000
P@10	0.0000	0.0000	0.0000	0.0000	0.0000
P@20	0.0000	0.0000	0.0000	0.0000	0.0000
P@30	0.0000	0.0000	0.0000	0.0000	0.0000
NDCG@10	0.0000	0.0000	0.0000	0.0000	0.0000
NDCG@20	0.0000	0.0000	0.0000	0.0000	0.0000
NDCG@30	0.0000	0.0000	0.0000	0.0000	0.0000
R@100	0.0000	0.0000	0.0000	0.0000	0.0000
R@500	0.0000	0.0000	0.0000	0.0000	0.0000
R@1000	0.0000	0.0000	0.0000	0.0000	0.0000
MAP	0.0000	0.0000	0.0000	0.0000	0.0000
mm:ss	00:00	00:00	00:00	00:00	00:00

2 Experiment: Passages and Aggregation Methods

2.1 Parameters for Passages and Aggregation Methods

Briefly describe the parameter settings that were used to obtain results in the passage and aggregation methods experiment.

3 Experiment: Reranking Configurations

3.1 Parameters for Reranking Configurations

Describe the reranking configurations that were used to obtain these results, and why you selected these configurations. Be clear about any intuitions or hypotheses that you wanted to explore. We look for good experimental design – parameters that explore interesting issues or hypotheses (even if the hypothesis turns out to be wrong).

3.2 Experimental Results for Reranking Configurations

Your .zip / .tgz file must include files named HW4-Exp-3.1a.qry, HW4-Exp-3.1a.param, etc., in the QryEval directory. The experimental results shown above must be reproducible by these files and the parameter values shown in the table.

	Config₁ (Exp-3.1a)	Config₂ (Exp-3.1b)	Config₃ (Exp-3.1c)	Config₄ (Exp-3.1d)	Config₅ (Exp-3.1e)	Config₆ (Exp-3.1f)
MRR@k	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
P@10	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
P@20	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
P@30	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NDCG@10	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NDCG@20	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NDCG@30	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
R@100	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
R@500	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
R@1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MAP	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
mm:ss	00:00	00:00	00:00	00:00	00:00	00:00