RMIT at the NTCIR-12 MobileClick-2 iUnit Ranking and Summarization Subtasks Kevin Ong, Ruey-Cheng Chen, Falk Scholer RMIT University, Melbourne Australia

Introduction

- > Learning-to-Rank (LTR) framework
- > Enhance iUnit ranking using feature-based approach
- > Build on existing Metzler and Kanungo (MK)[5] feature set

Method

> 5 classes (BL, QSum, Sem, QT, Ctx) > 5-fold cross validation; 20% hold-out

List of features

Aim

- > Find extension to MK feature set
- > Maximise score for ranking using LTR
- > Test out features on summarisation subtask
- > Check if LTR can deal with homogeneity



Base OddsRatio

QSum[5] ExactMatch TermOverlap SynonymOverlap LanguageModel iUnitLength

Sem[7]

QT

Leading5W1H TopRankedWikiPage WikipageReciporalRank WikipagePassage

Ctx

CollectionFrequency AverageSentencePos AverageDocumentRR

Gain/loss for BQP to baseline is greater in both direction than

Conclusion

For iUnit Ranking

- BQ outperforms BQP with smaller gain/loss for iUnit ranking

Further information

Contact Details

- Variance in gain/loss is suggestive

For iUnit Summarisation

- Only 1 submission for test using BQP
- Score may be improved by ranking according to iUnit before summarisation

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References:

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[5] D. Metzler and T. Kanungo. Machine Learned Sentence Selection Strategies for Query-Biased Summarization. In Proceedings of SIGIR 2008 Learning to Rank Workshop, 2008 [7] L. Yang, Q. Ai, D. Spina, R.-C. Chen, L. Pang, W.B. Croft, J. Guo, and F. Scholer. Beyond factoid QA: Effective methods for non-factoid answer sentence retrieval. In *Proceedings of* ECIR'16, 2016

Acknowledgements:

We thank NTCIR and ARC Discovery Grant (DP140102655) for providing travel and accommodation funding to the conference respectively.





