

COMP3009J INFORMATION RETRIEVAL

Exercises for Rank-Based Fusion

Q1

Using the result sets below,

- (i) Fuse the results using the *Interleaving* algorithm.
- (ii) Fuse the results using the *Borda Fuse* algorithm.
- (iii) Fuse the results using the *Reciprocal Rank Fusion* (RRF) algorithm.

Engine A	Engine B	Engine C
d ₁₀	d ₁₈	d ₆
d ₁₈	d ₆	d ₄
d ₄	d ₁	d ₃
d ₆	d ₂	d ₁₈
d ₅	d ₁₇	d ₅
d ₁₇		d ₁₀
d ₁₁		d ₁₅
d ₁₄		d ₁₉

Q2

Using the result sets below,

- (i) Fuse the results using the *Interleaving* algorithm.
- (ii) Fuse the results using the *Borda Fuse* algorithm.
- (iii) Fuse the results using the *Reciprocal Rank Fusion* (RRF) algorithm.

Engine A	Engine B	Engine C
d ₃	d ₁₁	d ₄
d ₆	d ₃	d ₁₁
d ₈	d ₆	d ₁₂
d ₄	d ₉	d ₇
d ₁₂	d ₄	d ₈
d ₇	d ₅	d ₅
d ₉	d ₂	
d ₂	d ₁	

Advanced: a suggested challenge for you to try

Q3

You can write a program that will automatically output result sets like those above, so that you can practice data fusion questions. To be useful for score-based fusion, it could generate a random score for each document also. Then it can implement different fusion algorithms so that you can check your manual answers compared to the real answers for each question.