

9 Information Retrieval (SHT)

Question Answering (QA) is the task of building a system that can select answer strings from a corpus, in response to a natural language question.

- (a) Mean Reciprocal Rank (MRR) has been used for several years by the TREC QA organisers as the main evaluation metric. Give the formula for MRR, and state two disadvantages of this method. [4 marks]
- (b) The Microsoft system competing in the TREC-10 conference (QA track) used an unusual approach for Question Answering (QA). Give a brief overview of how the system works. [4 marks]
- (c) Describe in detail, with an example, how the Microsoft system generates query strings and scores answers. [6 marks]
- (d) Consider the following question answer pair from the official TREC QA corpus:

Question: Who killed Abraham Lincoln?

Answer: John Wilkes Booth is perhaps America's most infamous assassin. He is best known for having fired the bullet that ended Abe Lincoln's life.

Can the Microsoft system as described in part (b) be awarded a point in the TREC competition for finding this answer? If yes, describe how and under which conditions. If no, describe changes to the system in part (b) that would make it possible to do so. [6 marks]