START OF QUIZ
Student ID:
97170732,Liu,Jinhong

Question 1

Topic: Lecture 8
Source: Lecture 8

What is the reasonining behind substituting TF-IDF with Okapi BM25? (1)

Question 2

Topic: Lecture 7
Source: Lecture 7

What is the purpose of an inverted index? (1)

Question 3

Topic: Lecture 6
Source: Lecture 6

In class, we saw a few topics that we were unable to identify. What could be a cause for such pointless topics (ie, how might we ensure that our topics are better? (2 reasons). (1)

Question 4

Topic: Lecture 8
Source: Lecture 8

Why do we not simply take the probability of a word given its document (maybe with smoothing added in)? (1)

Question 5

Topic: Lecture 7
Source: Lecture 7

Explain why the cosine similarity between a document and query vector is roughly equivalent to adding up the TF-IDF scores of each word in the document that occurs in the query. (2)

Question 6

Topic: Lecture 6
Source: Lecture 6

In some ways, we could consider Beta distributions themselves to be an embedding of a document. Explain, and explain how we might be able to leverage that. (2)

Question 7

Topic: Lecture 5
Source: Lecture 5

Explain the logic behind the IDF part of TF-IDF (ie, why does it give higher weights to more ”interesting” words?). (1)

Question 8

Topic: Lecture 5
Source: Lecture 5

Why can we represent a rank-m matrix as the sum of m rank-1 matrices *or* the product of an n x m matrix and an m x n matrix (ie, what is matrix multiplication doing that we can take advantage of?)? Explain. (2)

Question 9

Topic: Coding
Source: Coding

Write a function that returns the most likely n documents given a term-document matrix, a smoothing parameter, and a query. (3)

END OF QUIZ