Digital Media Laboratory

Weekly Report November 1, 2021

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Report No. 14
00/08/03- 00/08/10

Abstract

According to the last week's precise definition of the project's terminology, I conducted a literature review over personalized retrieval systems and found a few appropriate fits.

Description

- In this paper [2], the personalization issue is addressed with constructing an embedding space for each user. The goal is to find the context of users' intent and rank items based on that. For example, when an IT manager sends "apple" as a query, they probably mean the corporation, while a farmer probably refers to the fruit. Optimizations have been taken into account to solve the memory issues. Furthermore, the exciting thing about this paper is that they have executed their model on the same AOL dataset that we have been examining for the past few weeks. The idea of having a personalized embedding space for each user (or at least a group of users) might be smart, given that the background of the users' actions can produce additional positive or negative data.
- The second paper [1], which surprisingly has been published on the same journal as the previous one, also has to do with a personalized retrieval system. However, I could not find where they have taken the personalization into account. It seems that it is just an embedding based retrieval system (of course with essential complexities), on a large scale.

Next Week

1. We might continue the review of literature, or maybe go ahead with [2].

References

[1] Han Zhang et al. Towards personalized and semantic retrieval: An end-to-end solution for e-commerce search via embedding learning. *SIGIR '20: Proceedings of the 43rd International ACM SIGIR Conference on Research and Development in Information Retrieval*, 2020.

[2] Jing Yao et al. Employing personal word embeddings for personalized search. *SIGIR '20: Proceedings of the 43rd International ACM SIGIR Conference on Research and Development in Information Retrieval*, 2020.