

Abstract

- Looking for data sets related to [2]
- Investigation on later papers of Mr. Grbovic
- Studying the other article [1]

Description

- Unfortunately, no dataset associated to [2] was found on the Internet. In "Kaggle.com", all of the "Airbnb" data sets contained only the information available in the airbnb.com (i.e. listings, calendar, prices, etc.), while we need a data set containing search sessions and users' information. However, I found a few data sets that might be suitable for personalization;
 - AOL User Session Dataset; including user ids, queries, and clicked links
 - USA News Dataset; including user ids, information of news, and clicks
 - MIND: Microsoft News Recommendation Dataset; including user ids, news descriptions, time stamps, and interactions
- Mihajlo Grbovic have published three papers after [2], according to Google Scholar. None of them are as popular and prosperous as [2]. Among other resources related to him, a medium article is the most relevant work to personalization. The article is about "Airbnb Experiences" which is an entertainment booking platform. From the personalization aspect, the method is still based on GBDT, and some features are included from user's short-term (within a few days) history of desire to different categories (e.g. a user is interested in art activities based on their clicks, so the model recommend more artistic activities). While this is an offline method for personalization, like what is proposed in [2], online with the existence of online information, a few other features can be added to the model.
- After spending a few more hour on topics related to [1], watching YouTube videos about graph neural networks, I still could not get the sufficient knowledge to understand it correctly. GNNs seem hard to deal with.

Next Week

1. Choosing a suitable dataset for personalization phase.
2. Aim for the right method of personalization according to the dataset.

References

- [1] Chaozhuo Li et al. Adsgnn: Behavior-graph augmented relevance modeling in sponsored search. *SIGIR '21, July 11–15, 2021, Virtual Event, Canada.*, 2021.
- [2] H Cheng M Grbovic. Real-time personalization using embeddings for search ranking at airbnb. *KDD '18: Proceedings of the 24th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining*, 2018.