Digital Media Laboratory

Weekly Report November 30, 2019

Mohammadreza Rezaei
morezaei@ce.sharif.edu

Report No. 55
98/09/02- 98/09/08

Abstract

1. Reddit project
2. Display Advertising project
3. SP course TA work

Description

1. **Reddit project**
   We read more papers, also worked on an idea to gather some text based features to feed to the GCN. We found a way to summarize comments text in some fixed size vectors being able to feed them to GCN.

   We downloaded all versions of the GloVe, Word2Vec and FasText. We will experiment and examine all of them to find the most suitable method of comment embedding for our task.

   We are going to need a server located in U.S. to gather all the text data we need. And after that, we can start developing GCNs on our new real world dataset.

2. **Display Advertising project**
   I have read about Field-aware FMs[1], Field-Weighted FMs[2], Bayesian FMs[3] and Sparse FMs[4]. Also i wrote some parts of my thesis. I think it wouldn't take a long time for me to finish it.

3. **SP course TA work**
   I got ready for TA class and solved some examples for the students.

   I also designed questions for midterm II.

Next Week

- **Reddit project**

  We may have a meeting with Hamid, Another meeting with Sina and Kevin to plan our route. I think we need to make sure whats the purpose of this research and start planning more precisely for it.

- **Display Advertising project**

  Write reamaining parts about Sparse FM in thesis. Read papers about Attentional FM, Deep Interest Network, Deep & Cross Networks, Attention Stacked AutoEncoder, DeepFM and at last Wide and Deep network; And write their parts in the thesis.

- **SP course TA work**

  Solve and write down midterm II solutions

  Correct Quiz 7

  Take care of complains about quizzes

References

[1] Y. Juan, Y. Zhuang, W.-S. Chin, and C.-J. Lin, "Field-aware Factorization Machines for CTR Prediction," in Proceedings of the 10th ACM Conference on Recommender Systems - RecSys '16, Boston, Massachusetts, USA, 2016, pp. 43–50.

[2] J. Pan et al., "Field-weighted Factorization Machines for Click-Through Rate Prediction in Display Advertising," in Proceedings of the 2018 World Wide Web Conference on World Wide Web - WWW '18, Lyon, France, 2018, pp. 1349–1357.

[3] C. Freudenthaler, L. Schmidt-Thieme, and S. Rendle, "Bayesian Factorization Machines," p. 5.

[4] Z. Pan, E. Chen, Q. Liu, T. Xu, H. Ma, and H. Lin, "Sparse Factorization Machines for Click-through Rate Prediction," in 2016 IEEE 16th International Conference on Data Mining (ICDM), Barcelona, Spain, 2016, pp. 400–409.