

Paper(s) discussed

- (1) Yukuo Cen, Xu Zou, Jianwei Zhang, Hongxia Yang, Jingren Zhou, and Jie Tang. 2019. Representation Learning for Attributed Multiplex Heterogeneous Network. Proceedings of the 25th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining (KDD '19). Association for Computing Machinery, New York, NY, USA, 1358–1368.

Summary

- (1) "Representation Learning for Attributed Multiplex Heterogeneous Network" is a research paper that explores the problem of learning representations for attributed multiplex heterogeneous networks (AMHNs). The authors propose a novel method called AMGNCN, which stands for Attributed Multiplex Graph Convolutional Network, to learn effective representations of nodes in AMHNs.

Pros

- The method takes into account multiple sources of information, such as node attributes and network topology, to learn a shared embedding space for all the network layers.
- The authors evaluate their method on several real-world datasets and show that it outperforms existing state-of-the-art methods for AMHNs, indicating that it has practical utility.

Cons

- The authors do not provide a detailed analysis of the computational efficiency of the proposed method, which may be a concern for large-scale networks.
- The paper assumes a certain level of familiarity with network representation learning and machine learning concepts, which may make it difficult for some readers to fully understand.

Questions for discussion

- Can node types be represented as edge types? And will the results stay the same?
- Why tanh was used in softmax?

Presentation and Discussion Feedback

Name of Presenters: Jingren, Yue, Mahdi

How was the presentation? Did it help you?

It was well structured and followed the paper's train of thought well.

Feedback for the presenters:

- They could explain Inductive and Transductive learning more and go through the bullet points.
- Well timed and well explained!

Novel points raised during the presentation or discussion that you thought were crucial. Carefully consider all issues raised and list only those you feel were most important.

- The proposed AMGCN method could be extended to incorporate additional types of information, such as temporal or spatial data, to improve the quality of learned representations.
- The paper could be further evaluated on additional types of networks or in different application domains to assess the generalizability of the proposed method.