SUMMARY MEETING

YU SHI

12/10/2018
On network embedding

• Key insight: modeling **heterogeneous association** in real-world network data.

• Two papers published since last year
  
  • Yu Shi, Huan Gui, Qi Zhu, Lance Kaplan, and Jiawei Han. AspEm: Embedding Learning by Aspects in Heterogeneous Information Networks. SDM2018.
  
  • Yu Shi*, Qi Zhu*, Fang Guo, Chao Zhang, Jiawei Han. Easing Embedding Learning by Comprehensive Transcription of Heterogeneous Information Networks. KDD2018.

• One recycled paper under review
  
  • Added more baselines (heavily criticized by reviewers)
  
  • Hard for complex baselines to get performance similar to our simple proposed model even after heavy tuning

  • Yu Shi, Fangqiu Han, Xinwei He, Xinran He, Carl Yang, Luo Jie, and Jiawei Han. Preservation and Collaboration in Multi-View Network Embedding. arXiv:1801.06597.
On HIN motifs

- A.k.a., metagraphs, metastructures, hyperedges, hypergraphs, etc.
- One paper under review
  - Key insight: in modeling, not decomposing higher-order interactions into pairwise interactions helps retain informative signals.
  - Yu Shi, Xinwei He, Naijing Zhang, Carl Yang, and Jiawei Han. Higher-Order Clustering in Heterogeneous Information Networks via Motif-Based Comprehensive Transcription. arXiv:1811.11320.
- Two papers published in collaboration
  - Carl Yang, Yichen Feng, Pan Li, Yu Shi, and Jiawei Han. Meta-Graph Based HIN Spectral Embedding: Methods, Analyses, and Insights. ICDM2018.
  - Yuchen Li, Zhengzhi Lou, Yu Shi, Jiawei Han. Temporal Motifs in Heterogeneous Information Networks. KDD-MLG2018.
Taxonomy construction from text-rich HIN

- Jointly leading with Jiaming
  - collaborating with LinkedIn ERG team members (Qi Zhu, Carl), undergrads (Yuchen, Zhengzhi, Naijing), and LinkedIn researchers.
- Introduce the use of HIN in taxonomy construction in the proposed framework
- Identify the lack of modeling on **context granularity** in existing taxonomy construction studies and propose to resolve it with the **availability of HIN**

**Assumption** inclines to fail at default **context granularity**

**Assumption** holds if we can mine at the proper **context granularity**
Miscellaneous

- CS412 TA
- DMG duties: AAAI19 review coordination, group activity coordination, …
- Prelim
- Job hunting: will join Facebook after graduation