Yuhao Yang

yhyeung@whu.edu.cn • https://yuh-yang.github.io

EDUCATION

Wuhan University, Wuhan, Hubei Province, China
B.S. in Computer Science and Technology — Sep 2018 – Jun 2022 (expected)

- Major GPA: 3.80/4.00
- Weighted Average Score: 90.4/100

RESEARCH INTERESTS

My research interests lie in the intersection of *Information Retrieval* between *Data Mining* and *Natural Language Processing*. I'd like to explore solid innovations with good interpretability and simplicity in these fields.

Some sub-topics:

- General Information Retrieval: Recommendation, Ranking, User Modeling and Searching
- Interactive Information Retrieval: IR on graphs, IR with NLP, Graph Neural Networks, Language Models, etc.

PUBLICATIONS

(=Corresponding Author, † =Equal Contribution)*

Joint Knowledge Pruning and Recurrent Graph Convolution for News Recommendation.
Yu Tian†, **Yuhao Yang**†, Xudong Ren†, Pengfei Wang, Fangzhao Wu, Qian Wang, Chenliang Li*.
*The 44th Annual International ACM SIGIR Conference **(SIGIR'21)***. July 11-15, 2021 [Full paper]

RESEARCH EXPERIENCES

Graph Self-Supervised Learning For Recommendation and Knowledge Embedding, Undergraduate Research Assistant
School of Computer Science and Engineering, University of Hong Kong
Advised by Prof. Chao Huang — Jun 2021 – Present

- Explore the possibility to empower general recommendation and knowledge-aware recommendation with Graph SSL.
  - Graph SSL are natural to fight against noisy interactions in a CF learning of recommendation and in knowledge graph embedding. We are actively exploring if Graph SSL could significantly improve these problems.
- This work is under preparation.

Text and Knowledge Interest Distill For News Recommendation, Undergraduate Research Assistant
School of Cyber Science and Engineering, Wuhan University
Advised by Prof. Chenliang Li — Mar 2021 – Present

- Came up with the novel idea of **Interest Distill** based on practical problems
  - Observed that highly abstract and cohesive user interests distilled from click history are vital to representation learning.
  - Use Sentence-BERT and Hierarchical Self-Attention mechanism to capture qualified user embeddings.
- Proposed the multi-view method that considers both text and knowledge features.
  - Combines Interest Distill with text information and knowledge information. The latter is a variant of **Knowledge Pruning.**
- This work is under preparation, and will be submitted to ACM TOIS soon.

News Recommendation with Knowledge Graph, Undergraduate Research Assistant
School of Cyber Science and Engineering, Wuhan University
Advised by Prof. Chenliang Li — Apr 2020 – Feb 2021

- Came up with the novel idea of **Interest-aware Pruning** based on observations
  - Many recommender systems embed knowledge graphs ignorant of much noise, like irrelevant entities and useless relations.
  - Proposed to prune the knowledge graph based on users' interests. This method naturally combines **reinforcement learning**.
- Proposed to focus on **representation of user** rather than news
  - Found that user representation views like **long/short-term interests** are vital in recommendation systems, while many works ignore.
- Actively participated in every aspect of the research
  - Implemented the model and the baselines, mainly the latter.
  - Sorted and cleaned the two datasets(*MIND* and *Adressa*).
  - Wrote the first draft of the paper, and participated in proofreading
- This work has been accepted by SIGIR'2021.

EXPERIENCES

Research Intern, University of Hong Kong. Jun 2021 – Present

Attendee, The 44th Annual International ACM SIGIR Conference **(SIGIR'21)**. Jul 2021

Research Intern, WISC Lab, The Chinese University of Hong Kong. Apr 2021 – Jun 2021

Attendee, The 15th NII Testbeds and Community for Information Access Research **(NTCIR-15)**. Dec 2020

AWARDS & SCHOLARSHIPS

- AEON Scholarship, AEON 1% Club Foundation 2020
  For excellent academic performance and innovative thinking.
- Outstanding Student First-Class Scholarship, Wuhan University 2020
  For outstanding performance in academic and practical activities.
- Outstanding Student Second-Class Scholarship, Wuhan University 2019
  For outstanding performance in academic and practical activities.

SKILLS

- Laboratory research.
  I have research experience in WHUIR group at Wuhan University, developing necessary skills such as *Pytorch* coding, data statistics and cleaning using *Python* and model training in *Linux* environment.
- Presenting.
  I have presented research using talks for many times, almost every week in front of graduate students and professors.
- Academic writing.
  I have actively participated in the writing of our proposed paper, including most of the first draft writing, polishing and proofreading. Besides, I have written many pieces of assessed research writing. These include literature reviews, research reports, and meta-analyses.
- Programming languages and use of utilities.
  Python, PyTorch, Java, Linux, LaTeX