

Yilun Jin | Curriculum Vitae

Department of CSE, The Hong Kong University of Science and Technology
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I am currently a PhD student from Department of Computer Science and Engineering, The Hong Kong University of Science and Technology, Hong Kong SAR, advised by Prof. Qiang Yang and co-advised by Prof. Kai Chen. My current research interests lie in the field of Federated Learning, including algorithms and privacy & security. I am also interested in information network mining, including Graph Representation Learning, Graph Neural Networks, etc*.

Education

- **Ph.D. Student, Dept. of CSE, HKUST** **Hong Kong SAR**
Computer Science and Engineering 9.2019–
Advisor: Prof. Qiang Yang, Prof. Kai Chen (co-advisor).
- **B. S., School of EECS, Peking University** **Beijing, China**
Computer Science, GPA: 3.7/4.0 9.2015–7.2019
Advisor: Prof. Guojie Song
Selected courses: Advanced Algebra, Mathematical Analysis, Convex Optimization, Compiler Design.
- **B. Economics, National School of Development, Peking University** **Beijing, China**
Economics, GPA: 3.7/4.0 9.2016–7.2019
Selected courses: Intermediate Macro- & Micro-Economics, Econometrics, Financial Economics, Money and Banking, Special Topics on Reform in China
- **University of California, San Diego** **La Jolla, USA**
Exchange Student, GPA: 3.93/4.0 9.2017–12.2017
Courses: Computer Operating System, Machine Learning, Recommender System and Web Mining

Experiences

- **WeBank** **Shenzhen, China**
Internship, advised by Dr. Lixin Fan 6.2020–12.2020
Research on federated learning, adversarial machine learning, and machine learning privacy.
- **SenseTime** **Beijing, China**
Research Internship on Video analysis 3.2018–6.2018
Implemented content-aware collaborative filtering based video recommendation algorithm, along with a dataset for video recommendation, consisting both video corpus and interaction data.
- **University of California, San Diego** **La Jolla, USA**
Research Intern, advised by Prof. Julian McAuley 7.2018–9.2018
Research intern on deep, visually and temporally aware recommender systems and user preference modeling. Extending existing work *Neural Collaborative Filtering (He and Chua, 2017)* to make it temporally-aware.

*Last Updated May. 2022

- Peking University, China**

Research Assistant, advised by Prof. Guojie Song

Research on a wide range of topics through graph representation learning, including temporal aware, community aware and memory adaptive network embeddings. Several topics on Graph Neural Networks are also involved. See *Publications* for details.

Beijing, China

10.2018–9.2019

Publications

Conference Papers.....

- Selective Cross-city Transfer Learning for Traffic Prediction via Source City Region**

1. **Re-weighting**
Yilun Jin, Kai Chen, Qiang Yang 8.2022
 To appear in the 28th SIGKDD Conference on Knowledge Discovery and Data Mining (KDD), 2022.
- Theoretically Improving Graph Neural Networks via Anonymous Walk Graph Kernels**

2. *Qingqing Long*, Yilun Jin*, Yi Wu*, Guojie Song* 4.2021
 In the Web Conference (TheWebConf, a.k.a. WWW), 2021.
- Graph Structural-topic Neural Network**

3. *Qingqing Long*, Yilun Jin*, Guojie Song, Yi Li, Wei Lin* 8.2020
 In the 26th SIGKDD Conference on Knowledge Discovery and Data Mining (KDD), 2020.
- EPNE: Evolutionary Pattern Preserving Network Embedding**

4. *Junshan Wang*, Yilun Jin*, Guojie Song, Xiaojun Ma* 6.2020
 In the 24th European Conference on Artificial Intelligence (ECAI), 2020.
- GraLSP: Graph Neural Networks with Local Structural Patterns**

5. *Yilun Jin, Guojie Song, Chuan Shi* 2.2020
 In the 34th AAAI Conference on Artificial Intelligence, 2020.
- GraphMSE: Efficient Meta-path Selection in Semantically Aligned Feature Space for Graph Neural Networks**

6. *Yi Li, Yilun Jin, Guojie Song, Chuan Shi, Zihao Zhu, Yiming Wang* 2.2021
 In the 35th AAAI Conference on Artificial Intelligence, 2021.
- Domain Adaptive Classification on Heterogeneous Information Networks**

7. *Shuwen Yang, Guojie Song, Yilun Jin, Lun Du* 7.2020
 In the 29th International Joint Conference on Artificial Intelligence (IJCAI-PRICAI), 2020.
- Active Domain Transfer on Network Embedding**

8. *Lichen Jin, Yizhou Zhang, Guojie Song, Yilun Jin* 4.2020
 In the Web Conference (TheWebConf, a.k.a. WWW), 2020.
- Hierarchical Community Structure Preserving Network Embedding: A Subspace Approach**

9. *Qingqing Long, Yiming Wang, Lun Du, Guojie Song, Yilun Jin, Wei Lin* 11.2019
 In the 28th ACM International Conference on Information and Knowledge Management (CIKM), 2019.
Best Research Paper Runner-up
- DANE: Domain Adaptive Network Embedding**

10. *Yizhou Zhang, Guojie Song, Lun Du, Shuwen Yang, Yilun Jin* 8.2019
 In the 28th International Joint Conference on Artificial Intelligence (IJCAI). 2019.

Journal Paper.....

11. **SecureBoost: A Lossless Federated Learning Framework**
Kewei Cheng, Tao Fan, **Yilun Jin**, Yang Liu, Tianjian Chen, Qiang Yang 5.2021
In IEEE Intelligent Systems, 2021

(* stands for *Equal Contribution*.)

Technical and Personal skills

- **Mathematics Background:** Discrete Mathematics, Advanced Algebra, Convex Optimization, Mathematical Analysis, Probability and Statistics.
- **Programming Languages:** C, C++, Python (TensorFlow, PyTorch), Java, \LaTeX , SQL
- **Language Skills:** Chinese (native speaker), English (proficient with speaking 26 in TOEFL, analytical writing 5.0 in GRE)
 - I take charge of writing in most of the publications listed above.
- **General Skills:** Self motivation. Work well in a team.

Teaching

- **Teaching Assistant**, *Practice of Programming in C++*, Peking University, Spring 2019
- **Teaching Assistant**, *COMP4631: Computer and Communication Security*, The Hong Kong University of Science and Technology, Spring 2020
- **Teaching Assistant**, *COMP5631: Cryptography and Security*, The Hong Kong University of Science and Technology, Fall 2020
- **Teaching Assistant**, *COMP6211G: Federated Learning*, The Hong Kong University of Science and Technology, Spring 2021
- **Teaching Assistant**, *COMP3511: Operating Systems*, The Hong Kong University of Science and Technology, Fall 2021

Services

- **Program Committee Member/Reviewer:**
 - **2020:** TheWebConf (Poster & Demo), ICONIP
 - **2021:** AAAI, IJCAI, NeurIPS, NeurIPS Datasets and Benchmarks Track, ICONIP
 - **2022:** ICLR, IJCAI, ICML, TheWebConf (Poster & Demo), NeurIPS, NeurIPS Datasets and Benchmarks Track
- **Journal Reviewer:** IEEE BigData, IEEE T-ITS, Neural Networks, TMLR
- **Secondary Reviewer:**
 - **2020:** AAAI, ACL, NeurIPS

Awards

- **AAAI Student Scholarship**, AAAI, 2020
- **Best Research Paper Runner-up**, *CIKM Research Track*, 2019
- **Award for Research Excellence**, *Peking University*, 2018
- **Merit Student**, *Peking University*, 2017
- **Huawei Scholarship**, *Peking University*, 2017

- **Yu Minhong Scholarship for overseas exchange**, *Peking University*, 2017
- **Founder Scholarship**, *Peking University*, 2016
- **Award for Academic Excellence**, *Peking University*, 2016

Miscellaneous

- Aside from academic activities, I also participate in activities related to civil aviation. I am a distinguished author of civil aviation in *zhihu*, a question-answering website similar to *Quora*. I am also a member of *ACICFG*, a group for caption making of documentary *Air Crash Investigation*, whose works have been published to video websites including *acfun* and *bilibili*.