

# Yilun Jin | Curriculum Vitae

Department of CSE, The Hong Kong University of Science and Technology  
Hong Kong SAR – China

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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.

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\*Last Updated Jan. 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

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- 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. **nels**  
*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.
- SecureBoost: A Lossless Federated Learning Framework**

11. *Kewei Cheng, Tao Fan, Yilun Jin, Yang Liu, Tianjian Chen, Qiang Yang* 8.2019

The 1st International Workshop on Federated Machine Learning for User Privacy and Data Confidentiality, in conjunction with IJCAI 2019

(\* stands for *Equal Contribution*.)

## Technical and Personal skills

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- **Mathematics Background:** Discrete Mathematics, Advanced Algebra, Convex Optimization, Mathematical Analysis, Probability and Statistics.
- **Programming Languages:** C, C++, Python (TensorFlow, PyTorch), Java,  $\text{\LaTeX}$ , 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

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- **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

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- **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

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- **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

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- 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*.