

# Haoyu GENG (耿 皓宇)

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## Education

**Shanghai Jiao Tong University (SJTU), Shanghai, China** *Sep. 2016 - July. 2020*  
B.S in Engineering, Computer Science & Technology (IEEE Honor class)  
**Shanghai Jiao Tong University (SJTU), Shanghai, China** *Sep. 2020 - July. 2025 (expected)*  
Ph.D. in Computer Science & Technology Advisor: [Junchi Yan](#)

## Interests

Graph Learning (especially spectral graph theory), Combinatorial Optimization (with focus on ML4CO)

## Publications

- [1] **Haoyu Geng**, Runzhong Wang, Fei Wu, Junchi Yan, GAL-VNE: Solving the VNE Problem with Global Reinforcement Learning and Local One-Shot Neural Prediction, *ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD)*, 2023
- [2] **Haoyu Geng**, Chao Chen, Yixuan He, Gang Zeng, zhaobing Han, Hua Chai, Junchi Yan, Pyramid Graph Neural Network: a Graph Sampling and Filtering Approach for Multi-scale Disentangled Representations, *ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD)*, 2023
- [3] Chao Chen, **Haoyu Geng**, Nianzu Yang, Xiaokang Yang, Junchi Yan, EasyDGL: Encode, Train and Interpret for Continuous-time Dynamic Graph Learning, *Arxiv Preprint*, 2023
- [4] Chao Chen, **Haoyu Geng**, Gang Zeng, Zhaobing Han, Hua Chai, Xiaokang Yang, Junchi Yan Graph Signal Sampling for Inductive One-Bit Matrix Completion: a Closed-form Solution, *International Conference on Learning Representations (ICLR)* 2023
- [5] **Haoyu Geng**, Guanjie Zheng, Zhengqing Han, Hua Wei and Zhenhui Li, HMES: A Scalable Human Mobility and Epidemic Simulation System with Fast Intervention Modeling, *IEEE International Conference on Ubiquitous Intelligence and Computing (UIC)* 2022
- [6] Chao Chen, **Haoyu Geng**, Nianzu Yang, Junchi Yan, Daiyue Xue, Jianping Yu, Xiaokang Yang, Learning Self-Modulating Attention in Continuous Time Space with Applications to Sequential Recommendation, *International Conference on Machine Learning (ICML)*, 2021
- [7] **Haoyu Geng**, Shuodian Yu, Xiaofeng Gao, and Guihai Chen, Gated Sequential Recommendation System with Social and Textual Information under Dynamic Contexts, *International Conference on Database Systems for Advanced Applications (DASFAA)*, 2021

## Open-source Projects

**awesome-ml4co** | <https://github.com/Thinklab-SJTU/awesome-ml4co> **1021 stars**  
An up-to-date collection of awesome machine learning for combinatorial optimization papers.

## Internships

**Estimated Time of Arrival Prediction with Graph Neural Network** | *Didi, Beijing* *Nov.2021 - Aug 2022*  
*Research Intern* *Mentor: Gang Zeng (Didi)*

- I was responsible for improving existing ETA model based on TCN (Temporal convolutional network) with graph neural networks for pick-up and drop-off services in Didi ride-hailing.

**Dynamic Multi-graph Embedding for Recommendation** | *Meituan, Beijing* *April 2021 - Aug.2021*  
*Research Intern* *Mentor: Daiyue Xue (Meituan)*

- I was responsible for developing continuous-time attention with temporal point process, and deploying self-modulating attention in ranking system on Meituan Platform upon baseline attention module. Achieved 0.16% improvement on CVR with comparable model inference time (about 1.08 times) on real industry dataset of 2.46 million training entries (ranging within one month).

**Human Mobility & Epidemic Simulation** | *City Brain, Hangzhou & SJTU, Shanghai* *May 2020 - Oct.2020*  
*Research Intern* *Advisor: Prof. [Guanjie Zheng](#) ( [John Hopcroft Center](#), SJTU)*

- I was responsible for developing epidemic simulation system, [HMES](#), based on the deployment of KDD 2020 workshop, [Challenge on Mobility Intervention for Epidemics](#).

**Context-Aware Recommendation System** | [Crowd Dynamics Lab](#), UIUC July, 2019 - Dec, 2019  
Research Intern Advisor: Prof. [Hari Sundaram](#) (University of Illinois at Urbana-Champaign)

- I was responsible for developing a recommendation system with bilinear-interaction context-aware sequential framework to address data skew and sparsity issues.

## **Academic Services & Skills**

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- I serve as the reviewer for conferences (NeurIPS 2023)
- **Skills:** *Programming Languages:* C++/Python/MySQL/Java/Matlab/  
*English:* TOEFL (105) / GRE (155+170+4.0)