

# Qibin Chen

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## EDUCATION

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### Carnegie Mellon University, School of Computer Science

Pittsburgh, PA

*M.S. in Language Technologies (Research Oriented)* | GPA: 4.09/4.33

Aug 2022

- Research Fellowship, *Parallel Computer Architecture and Programming, Search Engines, Neural Networks for NLP*

### Tsinghua University

Beijing, China

*B.E. in Computer Science* | GPA: 3.82/4.00, Top 5%

Jul 2019

- Teaching Assistantship: *Advanced Machine Learning*
- Outstanding Undergraduate Thesis of Tsinghua, Outstanding Graduate of Beijing, Qualcomm Scholarship

## EXPERIENCE

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### Airbnb, Inc.

Beijing, China

*Software Engineering Intern (Full Stack)*

May 2021 – Aug 2021

- Designed and deployed a seq2seq-based automatic title generation pipeline for new listings on Airbnb China
- Developed an auto-complete feature based on language models for helping hosts write listing descriptions faster
- Implemented a human evaluation pipeline for monitoring machine learning models effectiveness in real-time

### STRUDEL Lab, Carnegie Mellon University

Pittsburgh, PA

*Graduate Research Assistant*

Aug 2020 – Ongoing

- Worked on the intersection of Software Engineering, Machine Learning, and Natural Language Processing
- Proposed a novel contrastive learning-based method for variable representation pre-training and achieved state-of-the-art with 39.3% improvement over the previous best method. Paper under submission
- Published a Transformer-based method for idiomatic reverse engineering and achieved state-of-the-art on two datasets

### Alibaba Group & Knowledge Engineering Group, Tsinghua University

Beijing, China

*Research Intern*

Oct 2018 – Feb 2020

- Worked on Machine Learning, Natural Language Processing, Knowledge Graphs and their applications
- Published a graph neural network pre-training method achieving state-of-the-art in 3 graph mining tasks on 10 datasets
- Published knowledge graph-based conversational recommender system achieving state-of-the-art on the ReDial dataset
- Published a novel method for multi-hop question answering in web-scale documents, surpassing previous best by 47.9%
- Core development member for the open-source graph representation learning toolkit [cogdl](https://github.com/qibinc/cogdl) with ~800 stars and ~200 forks

## PUBLICATIONS

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- **Qibin Chen**, Jeremy Lacomis, Edward Schwartz, Claire Le Goues, Bogdan Vasilescu, Graham Neubig. *Augmenting Decompiler Output with Learned Variable Names and Types*. **USENIX Security 2022**. [\[Paper\]](#)
- Jiezhong Qiu, **Qibin Chen**, Yuxiao Dong, Jing Zhang, Hongxia Yang, Ming Ding, Kuansan Wang and Jie Tang. *Graph Contrastive Coding for Graph Neural Network Pre-Training*. **KDD 2020 (Most cited paper in KDD'20)**. [\[Paper\]](#) [\[GitHub\]](#)
- **Qibin Chen**, Junyang Lin, Yichang Zhang, Ming Ding, Yukuo Cen, Hongxia Yang, Jie Tang. *Towards Knowledge-Based Recommender Dialog System*. **EMNLP 2019**. [\[Paper\]](#) [\[GitHub\]](#)
- Ming Ding, Chang Zhou, **Qibin Chen**, Hongxia Yang, Jie Tang. *Cognitive Graph for Multi-Hop Reading Comprehension at Scale*. **ACL 2019 (Oral presentation)**. [\[Paper\]](#) [\[GitHub\]](#)
- **Qibin Chen**, Junyang Lin, Yichang Zhang, Hongxia Yang, Jingren Zhou, Jie Tang. *Towards Knowledge-Based Personalized Product Description Generation in E-commerce*. **KDD 2019**. [\[Paper\]](#) [\[GitHub\]](#)

## SKILLS

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**Languages:** Python, Java, C++/C, CUDA, Shell, SQL, JavaScript

**Machine Learning:** PyTorch, TensorFlow, scikit-learn, NumPy, SciPy, fairseq

**Tools:** Git, Docker, Singularity, LaTeX