

Chen Qu

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Center for Intelligent Information Retrieval
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Education

University of Massachusetts Amherst

M.S./Ph.D. program in Computer Science

Advisor: Prof. W. Bruce Croft, ACM Fellow

AMHERST, MA, US
Sept 2017 – 2022 (expected)

Dalian University of Technology

B.E. in Computer Science and Technology

DALIAN, CHINA
Sept 2013 – Jul 2017

Internship Experience

Microsoft Research

Research Intern (Information Retrieval)

I worked as a research intern on information retrieval at the [Information and Data Sciences group](#) at Microsoft Research. I worked on conversational search and document ranking.

REDMOND, US
May 2019 – Aug 2019

Alibaba Group

Research Intern (Natural Language Processing)

I worked as a research intern on natural language processing at the AliMe team at Alibaba Group. AliMe is a conversational assistant designed mainly for customer service in the E-commerce domain. It is able to take voice and text input, incorporate context to QA, and support multi-round interactions. I worked on reinforcement learning and transfer learning for retrieval based question answering.

HANGZHOU, CHINA
May 2018 – Aug 2018

Tencent

Software Engineer Intern (Backend)

I worked as a software engineer intern at the Mobile Internet Group in Tencent. I worked on a large-scale web crawler and the backend of a Content Management System using C++ to manage a knowledge base for a personal assistant App.

SHENZHEN, CHINA
Jul 2016 – Aug 2016

Research Experience

Center for Intelligent Information Retrieval, UMass Amherst

M.S./Ph.D. Student and Research Assistant

Advisor: Prof. W. Bruce Croft

I am working with Prof. W. Bruce Croft on information retrieval, conversational search, and question answering. Specifically, I worked on user intent characterization and prediction in information-seeking conversations, deep text matching for response ranking and QA, and conversation history modeling for conversational question answering.

AMHERST, MA, US
Sept 2017 – Present

DUT Information Retrieval Lab, Dalian University of Technology

Undergraduate Research Assistant

Advisor: Dr. Kan Xu and Prof. Yuan Lin

I worked with Dr. Kan Xu and Prof. Yuan Lin on information retrieval and learning to rank. We proposed and implemented a query expansion method based on word embedding. We also developed and integrated several feature generation methods for documents reranking in a patent retrieval system with promising results on TREC-CHEM dataset.

DALIAN, CHINA
Dec 2016 – Jun 2017

DUT Natural Language Processing Lab, Dalian University of Technology

Undergraduate Research Assistant

Advisor: Prof. Lishuang Li

I worked with Prof. Lishuang Li on natural language processing and named-entity recognition. We created a system to recognize chemical names in patents using Conditional Random Fields (CRFs). We used Python to extract more than two dozen of high-quality features for the learning and testing process. We participated in BioCreative evaluation and received high F-scores.

DALIAN, CHINA
Jul 2015 – Sept 2015

Publications

1. Attentive History Selection for Conversational Question Answering. **CIKM 2019**. Full Paper.
Chen Qu, Liu Yang, Minghui Qiu, Yongfeng Zhang, Cen Chen, W. Bruce Croft and Mohit Iyyer.
2. A Hybrid Retrieval-Generation Neural Conversation Model. **CIKM 2019**. Full Paper.
Liu Yang, Junjie Hu, Minghui Qiu, **Chen Qu**, Jianfeng Gao, W. Bruce Croft, Xiaodong Liu, Yelong Shen and Jingjing Liu.
3. BERT with History Answer Embedding for Conversational Question Answering. **SIGIR 2019**. Short Paper.
Chen Qu, Liu Yang, Minghui Qiu, W. Bruce Croft, Yongfeng Zhang and Mohit Iyyer. **SIGIR 2019**. Short Paper.
4. User Intent Prediction in Information-seeking Conversations. **CHIIR 2019**. Full Paper.
Chen Qu, Liu Yang, Bruce Croft, Yongfeng Zhang, Johanne R Trippas and Minghui Qiu.
5. Answer Interaction in Non-factoid Question Answering Systems. **CHIIR 2019**. Short Paper.
Chen Qu, Liu Yang, W. Bruce Croft, Falk Scholer and Yongfeng Zhang.
6. Learning to Selectively Transfer: Reinforced Transfer Learning for Deep Text Matching. **WSDM 2019**. Full Paper.
Chen Qu, Feng Ji, Minghui Qiu, Liu Yang, Zhiyu Min, Haiqing Chen, Jun Huang and W. Bruce Croft.
7. Analyzing and Characterizing User Intent in Information-seeking Conversations. **SIGIR 2018**. Short Paper.
Chen Qu, Liu Yang, W. Bruce Croft, Johanne R Trippas, Yongfeng Zhang, Minghui Qiu.
8. Response Ranking with Deep Matching Networks and External Knowledge in Information-seeking Conversation Systems. **SIGIR 2018**. Full Paper.
Liu Yang, Minghui Qiu, **Chen Qu**, Jiafeng Guo, Yongfeng Zhang, W. Bruce Croft, Jun Huang, Haiqing Chen.

Selected Courses

University of Massachusetts Amherst: Neural Networks, Machine Learning, Information Retrieval, Advanced Algorithm, Advanced Information Assurance, Software Engineering, Distributed Operating Systems

Dalian University of Technology: Mathematical Analysis for Engineering, Linear Algebra and Analytic Geometry, Discrete Mathematics, Compile Principles, Computer Network, Computer Organization Principles, Object-oriented Programming, Operating Systems, Principle of Database System, Hardware Comprehensive Training, Computer System Structure, Software Comprehensive Training, Introduction to Linux, Artificial Intelligence, Computer Graphics, Digital Image Processing

Independent Coursework: Applied Machine Learning in Python (Coursera), Text Mining and Analytics (Coursera), Machine Learning (Coursera)

Honors and Awards

W. Bruce Croft Graduate Scholarship in Computer Science 2019.

SIGIR Student Travel Grant for SIGIR18, CHIIR19, and CIKM19.