

Qingquan SONG

Contact Information

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Research Interests

Data Mining & Machine Learning: Dynamic Data Analysis, Automated Machine Learning, Tensor Analysis, Lifelong Learning, Network Embedding.

Education and Experiences

09/2016–Now	Texas A&M University (TAMU) Ph.D student in Computer Science	Dept. of Computer Science & Engineering Advisor: Dr. Xia (Ben) Hu
05/2019–08/2019	Facebook Inc. (Menlo Park) Research Intern	FAIAR Personalization Team Mentor: Dr. Hanning (Eric) Zhou
09/2012–06/2016	University of Science and Technology of China (USTC) Bachelor of Science in Statistics	Dept. of Statistics and Finance Overall GPA: 3.95/4.30

Publications

- [KDD' 17] **Qingquan Song**, Xiao Huang, Hancheng Ge, James Caverlee, and Xia Hu. Multi-Aspect Streaming Tensor Completion. In *Proceedings of the 23rd SIGKDD Conference on Knowledge Discovery and Data Mining*. (Oral)
- [ICDM' 18] **Qingquan Song**, Haifeng Jin, Xiao Huang, and Xia Hu. Multi-Label Adversarial Perturbations. In *Proceedings of the 2018 IEEE International Conference on Data Mining*. (Short)
- [KDD' 18] Mengnan Du, Ninghao Liu, **Qingquan Song**, and Xia Hu. Towards Explanation of DNN-based Prediction with Guided Feature Inversion. In *Proceedings of the 24th SIGKDD Conference on Knowledge Discovery and Data Mining*. (Oral)
- [WSDM' 18] Xiao Huang, **Qingquan Song**, Jundong Li, and Xia Hu. Exploring Expert Cognition for Attributed Network Embedding. In *Proceedings of the 11th ACM International Conference on Web Search and Data Mining*.
- [ICBK' 18] Haifeng Jin, **Qingquan Song**, and Xia Hu. Discriminative Graph Autoencoder. In *Proceedings of the 9th IEEE International Conference on Big Knowledge*.
- [RecSys' 18] Xing Zhao, **Qingquan Song**, James Caverlee, and Xia Hu. TrailMix: An Ensemble Recommender System for Playlist Curation and Continuation. In *Proceedings of the 2018 ACM Recommender Systems Challenge workshop*.
- [TKDD' 19] **Qingquan Song**, Hancheng Ge, James Caverlee, and Xia Hu. Tensor Completion Algorithms in Big Data Analytics. *ACM Transactions on Knowledge Discovery from Data*.
- [AAAI' 19] Xiao Huang, **Qingquan Song**, Fan Yang, and Xia Hu. Large-Scale Heterogeneous Feature Embedding with Networks. *Proceedings of the 33rd AAAI Conference on Artificial Intelligence*.
- [KDD' 19] Haifeng Jin, **Qingquan Song**, and Xia Hu. Auto-Keras: An Efficient Neural Architecture Search System. In *Proceedings of the 25th SIGKDD Conference on Knowledge Discovery and Data Mining*. (Oral)

- [KDD' 19] **Qingquan Song**, Shiyu Chang, and Xia Hu. Coupled Variational Recurrent Collaborative Filtering. In *Proceedings of the 25th SIGKDD Conference on Knowledge Discovery and Data Mining*. [code]
- [KDD' 19] Xiao Huang, **Qingquan Song**, Yuening Li, and Xia Hu. Graph Recurrent Networks with Attributed Random Walks. In *Proceedings of the 25th SIGKDD Conference on Knowledge Discovery and Data Mining*.

Preprints & Paper Under Review

- [Under Review] Kaixiong Zhou, **Qingquan Song**, Xiao Huang, and Xia Hu. Automated Graph Neural Networks.
- [Under Review] Yiwei Chen, **Qingquan Song**, and Xia Hu. Techniques for Automated Machine Learning.
- [Under Review] Xiangwu Zuo, **Qingquan Song**, Mengnan Du, and Xia Hu. Generating Consistent Multimodal Dialogue Responses with Emoticon Context Model.

Research and Open Source Projects

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| 09/2016–Now | <p>HELIOS: Accelerated Recovery of Evolving Spatial-Temporal Dynamics</p> <ul style="list-style-type: none"> ○ Funded By: Defense Advanced Research Projects Agency (DARPA) ○ This project, which is a subproject of the Next-Generation Social Science (NGS2) project, aims to create new methods, algorithms, and frameworks for “filling in the gaps” of large rapidly evolving spatial-temporal datasets that are characterized by noisy and missing information. ○ Open-Source Package: PyTen. (A Python repository for advanced tensor decomposition and completion.) |
| 03/2017–Now | <p>D3M: Data-Driven Discovery of Models</p> <ul style="list-style-type: none"> ○ Funded By: Defense Advanced Research Projects Agency (DARPA) ○ This project aims at developing automated model discovery systems that enable users with subject matter expertise but no data science background to create empirical models of real, complex processes. ○ Open-Source Package: Auto-Keras. (A Python repository for automated neural architecture search.) 6K+ Stars on Github. |
| 03/2017– Now | <p>Novel Embedding Algorithms for Large-Scale & Complex Attributed Networks</p> <ul style="list-style-type: none"> ○ Funded By: National Science Foundation (NSF) ○ The goal of this project is to develop efficient and effective network embedding algorithms to deal with large-scale attributed networks that contain complex network interactions. |

Honors, Awards, & Fellowships

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| 08/2019 | KDD 2019 Student Travel Awards |
| 06/2019 | Department of Computer Science and Engineering Travel Grant Funds |
| | ○ Awarded by College of Engineering, TAMU |
| 03/2019 | Graduate Research Excellence Award |
| | ○ Awarded by College of Engineering, TAMU |
| 10/2018 | Nomination of IBM PhD Fellowship by Department of CSE TAMU |
| | ○ Top 3 Among All PhD Students in Dept. of CSE TAMU |
| 08/2017 | KDD 2017 Student Travel Awards |
| 04/2017 | Department of Computer Science and Engineering Travel Grant Funds |
| | ○ Awarded by College of Engineering, TAMU |
| 04/2017 | Silver Prize in Statistics Poster Session, TAMU |
| | ○ Awarded by Southeastern Texas Chapter American Statistical Association |
| 10/2015 | Kwang-Hua Scholarship, 1/69(Class), 50/7600 (University) |
| | ○ Awarded by University of Science and Technology of China |
| 10/2013 | Liu-Li Leadership Scholarship (1/67) |
| | ○ Awarded by the School of Management, University of Science and Technology of China |

Technical Skills

Basic Knowledge: PYTHON, R, MATLAB, L^AT_EX, C/C++

Teaching

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| 2015-2016 | Teaching assistant <ul style="list-style-type: none">○ Course: Probability Theory and Mathematical Statistics (Undergraduate) |
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Extracurricular Activities

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| 2012-2016 | Male Bass Group, USTC Student Choir <ul style="list-style-type: none">○ Perform in 6 special concerts and 2 annual concerts;○ Won the Silver Prize in Adult Male Group, the Silver Prize in Mixed Choir Group, the 12th China International Choir Festival in 2014 (188 choirs from 43 countries)○ Invited performer in Singing Ceremony of Hefei Statement during the C9 Annual Presidents Meetings (National meeting for China's Ivy League, C9). |
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