JIAQI ZHANG

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EDUCATION

Brown University, United States *Sep. 2021 - Present*
Ph.D., Computer Science

Southeast University, China *Sep. 2015 - Jun. 2020*
B.S., Software Engineering GPA: **3.56**/4.00

RESEARCH INTEREST

Bioinformatics: single-cell genomics, multi-modal integration, model interpretation, gene network
Machine Learning: multi-modal learning, manifold learning, large-scale optimization, probabilistic graphical model

PUBLICATIONS

(⋆: conference paper; †: journal paper)

⋆ **Jiaqi Zhang**, Erica Larschan, Jeremy Bigness, and Ritambhara Singh. scNODE: Generative Model for Temporal Single Cell Transcriptomic Data Prediction. *23rd European Conference on Computational Biology (ECCB)*, 2024 doi.org/10.1101/2023.11.22.568346.

† **Jiaqi Zhang** and Ritambhara Singh. Investigating the Complexity of Gene Co-expression Estimation for Single-cell Data. *Journal of Machine Learning for Modeling and Computing*, 2023.

† Beilun Wang, **Jiaqi Zhang**, Haoqing Xu, and Te Tao. Fast and scalable learning of sparse changes in high-dimensional graphical model structure. *Neurocomputing*, 2022.

† Qianli Yang, Zhongqiao Lin, Wenyi Zhang, Jianshu Li, Xiyuan Chen, **Jiaqi Zhang**, and Tianming Yang. Monkey plays Pac-Man with compositional strategies and hierarchical decision-making. *Elife*, 2022.

† Beilun Wang, **Jiaqi Zhang**, Yan Zhang, Meng Wang, and Sen Wang. Scalable Estimator for Multi-task Gaussian Graphical Models Based in an IoT Network. *ACM Transactions on Sensor Networks*, 17(3), June 2021.

⋆ **Jiaqi Zhang**, Meng Wang, Qinchi Li, Sen Wang, Xiaojun Chang, and Beilun Wang. Quadratic Sparse Gaussian Graphical Model Estimation Method for Massive Variables. *International Joint Conferences on Artificial Intelligence Organization (IJCAI)*, 2020.

CONFERENCE AND TALKS

Title: scNODE: Generative Model for Temporal Single Cell Transcriptomic Data Prediction

2023 MLCB, 2024 RECOMB: Poster Presentation

Title: Quadratic Sparse Gaussian Graphical Model Estimation Method for Massive Variables

2020 IJCAI: Poster Presentation

PROFESSIONAL COMMUNITY SERVICE

2022 - 2024 Sub-reviewer of ICML, NeurIPS, ICLR, and RECOMB conferences.

PROJECT EXPERIENCE

Dropout-Aware Weighted NMF on scRNA-seq Data 2022

◇ Course final project for *CS2952Q Robust Algorithms for Machine Learning.*

Disease Prediction Using Deep Learning Methods 2022

◇ Course final project for *CS2470 Deep Learning*, collaborated with Atishay Jain and Tassallah Amina Abdullahi.

A Distributed Repaying Loan Ability Evaluating System Based on Gradient Boosting Machine 2018

◇ Responsible for software architecture and backend modules implementation.

◇ Project for a seminar course; the third prize.

An Employee Management System 2017

◇ Responsible for software architecture and core modules implementation.

◇ Project for a seminar course; the third prize.