Jiashun **Xiao**

Data scientist · Statistical Geneticist

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Summary

I am currently a Research Scientist at the Shenzhen Institute of Big Data. I earned my Bachelor's degree in Bioinformatics from Southern University of Science and Technology in 2017, followed by a PhD in Mathematics from the Hong Kong University of Science and Technology in 2022. My research interests encompass statistical genetics, bioinformatics, and the development of statistical models that leverage spatial transcriptomic and multi-omics data. I am particularly focused on advancing methodologies that enhance our understanding of complex biological systems through integrative data analysis.

Education

The Hong Kong University of Science and Technology (HKUST)　　　　　*Hong Kong, China*

Ph.D. student in Math　　　　　*2018.09 - 2022.08*

- Accumulative CGA: 3.94/4.3

Southern University of Science and Technology of China (SUSTech)　　　　　*Shenzhen, China*

B.S. in Bioinformatics　　　　　*2013.09 - 2017.07*

- Accumulative GPA: 3.68/4.0, Rank: 1/12

Work Experience

Shenshen Research Institute of Big Data　　　　　*Shenzhen, China*

Research Scientist　　　　　*2022.09 - present*

WeGene Corp.　　　　　*Shenzhen, China*

Employee & Bioinformatics engineer　　　　　*2017.01 - 2018.08*

Funding

Young Scientists Fund of the National Natural Science Foundation of China　　　　　*Shenzhen, China*

Principal Investigator　　　　　*2025-2027*

Title: Development of Computational and Statistical Methods for Cell Type-specific eQTLs Mapping through Integrated Analysis of Multi-Level Data

Shenzhen Science and Technology Innovation Program　　　　　*Shenzhen, China*

Principal Investigator　　　　　*2024-2026*

Title: Cell Niche Recognition Models and Algorithms Based on Multi-Platform Spatial Transcriptomics Data

Shenzhen Research Institute of Big Data Internal Project　　　　　*Shenzhen, China*

Principal Investigator　　　　　*2023-2024*

Title: Cell Type Annotation Models and Algorithms for Spatial Transcriptomics Based on Multimodal Data

Selected Publications

- Leqi Tian, Jiahun Xiao*, Tianwei Yu*
  A Robust Statistical Approach for Finding Informative Spatially Associated Pathways.
  Briefings in Bioinformatics, 2024
- Xiaomeng Wan[#], Jiashun Xiao[#], Sindy Sing Ting Tam, Mingxuan Cai, Ryohichi Sugimura, Yang Wang, Xiang Wan, Zhixiang Lin, Angela Ruohao Wu, Can Yang*
  Integrating spatial and single-cell transcriptomics data using deep generative models with SpatialScope.
  Nature Communications, 2023
- Jiashun Xiao[#], Mingxuan Cai[#], Xinyi Yu, Xianghong Hu, Gang Chen, Xiang Wan, Can Yang*
  Leveraging the local genetic structure for trans-ancestry association mapping.
  The American Journal of Human Genetics (AJHG), 2022
- Jiashun Xiao[#], Mingxuan Cai[#], Xianghong Hu, Xiang Wan, Gang Chen, Can Yang*
  XPXP: Improving polygenic prediction by cross-population and cross-phenotype analysis.
  Bioinformatics, 2022
- Mingxuan Cai[#], Jiashun Xiao[#], Shunkang Zhang[#], Xiang Wan, Hongyu Zhao, Gang Chen, Can Yang*
  A unified framework for cross-population trait prediction by leveraging the genetic correlation of polygenic traits.
  The American Journal of Human Genetics (AJHG), 2021

Honors & Awards

2022	**Final list**, HKUST RedBird Academic Excellence Award	*Hong Kong, China*
2020	**Special prize**, HKUST Info Challenge	*Hong Kong, China*
2017	**Final list**, SUSTech outstanding graduate	*Shenzhen, China*
2017	**Final list**, Outstanding graduation thesis in annual graduates' thesis competition	*Shenzhen, China*
2016	**Silver prize**, International Genetically Engineered Machine Competition World Final	*Boston, U.S.A*
2016	**First place**, Best poster in department of biology annual academic poster competition	*Shenzhen, China*
2013	**Final list**, Student start-up scholarship, ¥6000 per year in college	*Shenzhen, China*

Teaching

- Calculus, Teaching Assistant, HKUST, Fall 2019.
- Calculus II, Teaching Assistant, HKUST, Spring 2019, Spring 2020, Spring 2021.
- Matrix Algebra and Applications, Teaching Assistant, HKUST, Fall 2020, Fall 2021.
- Introduction to Multivariable Calculus, Teaching Assistant, HKUST, Spring 2022.