Tongqiu (Iris) Jia

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https://tongqiu-jia.github.io

EDUCATION

- **University of Washington (UW)**
  PhD in Genome Sciences   Sept 2022 - present

- **University of Washington (UW)**
  MPH in Epidemiology   Sept 2020 - Jun 2022

- **University of California, San Diego (UCSD)**
  B.S. in Biology with Specialization in Bioinformatics   Sept 2014 – Jun 2018
  Minor in Computer Science

PUBLICATIONS

- Sarah N. Wright, Brittany S. Leger, Sara Brin Rosenthal, Sophie N. Liu, **Tongqiu Jia**, Apurva S. Chitre, Oksana Polesskaya et al. "Genome-wide association studies of human and rat BMI converge on synapse, epigenome, and hormone signaling networks." *Cell reports* (2023).
- **Tongqiu Jia**, Brenton Munson, Hana Lango Allen, Trey Ideker, and Amit R. Majithia. "Thousands of missing variants in the UK BioBank are recoverable by genome realignment." *Annals of human genetics* (2020).
- Daniel E. Carlin, Samson Fong, Yue Qin, **Tongqiu Jia**, Justin K. Huang, Bokan Bao, Chao Zhang, and Trey Ideker. "A fast and flexible framework for network assisted genomic association." *iScience* (2019).
- Sophie Aimon, Takeo Katsuki, **Tongqiu Jia**, Logan Grosenick, Michael Broxton, Karl Deisseroth, Terrence J. Sejnowski, and Ralph J. Greenspan. "Fast near-wholebrain imaging in adult Drosophila during responses to stimuli and behavior." *PLoS biology* (2019).
- Justin K. Huang, **Tongqiu Jia**, Daniel E. Carlin, and Trey Ideker. "pyNBS: a Python implementation for network-based stratification of tumor mutations." *Bioinformatics* (2018).

RESEARCH EXPERIENCE

- **Bioinformatics Intern, PetDx**   Jun 2022 – Aug 2022
  ○ Focused on research in microbiome and early cancer detection for canines with liquid biopsies
- **Graduate Research Assistant, UW**   Jun 2021 – Sept 2022
  Mentor: Dr. Sara Lindstroem
  ○ Studied the role of host genetics on weight gain following ART initiation in people living with HIV
- **MPH Practicum, UW Husky Coronavirus testing**   Nov 2021 – Mar 2022
  Mentors: Dr. Ana Weil, Dr. Helen Chu
  ○ Analyzed the demographics, survey response, temporal and molecular patterns of SARSCoV2 among faculty and staff participants in Husky Coronavirus testing
  ○ Visualized the SARS-Cov-2 genetic epidemiology patterns in sequencing samples collected through Husky Coronavirus Testing
- **Graduate Research Assistant, UW**   Dec 2020 – Jun 2021
  ○ Evaluated the public health impact of exposure notification app - WA Notify
  ○ Performed analysis on statewide surveys of knowledge, attitude and perceptions of COVID-19
  ○ Analyzed data on adaption and usage of WA Notify
- **Application Programmer, Ideker Laboratory, UCSD**   Aug 2018 – Aug 2020
  Mentors: Dr. Trey Ideker, Dr. Daniel Carlin
  ○ Implemented network-based GWAS method and corresponding software and web interface

- Developed network-based GWAS methods for cross-species translation and shared disease mechanism discovery
- Analyzed genotype array and whole exome sequencing data for variants discovery
- **Undergraduate Research Assistant, Ideker Laboratory, UCSD**   Sept 2016 – Aug 2018
  Mentors: Dr. Trey Ideker, Dr. Daniel Carlin. Dr. Justin Huang
  - Participated Python software development of Network Based Stratification algorithm (pyNBS)
  - Characterized features and parameters of different network propagation algorithms
- **Lab Technician, Salk Institute for Biological Studies**   Sept 2017 – Jun 2018
  Mentors: Dr. Terrence Sejnowski, Dr. Sophie Aimon
  - Processed and analyzed large fruit fly whole brain image and behavioral datasets
  - Automated and optimized fruit fly whole brain imaging data and behavioral data analysis pipeline

TEACHING EXPERIENCE

- **Graduate Teaching Assistant**   Human Centered Design and Engineering, UW
  DATA 512: Human-Centered Data Science   Autumn 2020, Autumn 2021

- **Teaching Assistant**   Summer Institute in Statistical Genetics, UW
  Pathway and Network Analysis for Omics Data   July 2020, July 2021, July 2022
  Instructor: Dr. Ali Shojaie

ADDITIONAL EXPERIENCE

- **System Administrative Assistant, Recreation Department, UCSD**   Oct 2015 – Apr 2017
  - Troubleshot computer software issues and set up operating systems and software on new computers
  - Maintained website (recreation.ucsd.edu) and published web page updates under supervision
- **Volunteer, Hamilton Glaucoma Center, Shiley Eye Institute, UCSD** May 2015 – Oct 2016
  - Performed data collection and database entry in accordance with established protocols
  - Interacted with patients prior to their appointment in preparation for their visits

SKILLS

- **Programming Proficient:** Python, Unix, Git
- **Programming Intermediate:** R, Java, SQL, Stata, C++, JavaScript, MATLAB
- **Machine Learning:** Scikit-learn, Tensorflow, PyTorch
- **Language:** English, Mandarin