

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
Minor in Computer Science
Sept 2014 – Jun 2018

PUBLICATIONS

- **Papers**
 - **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 Groseknick, 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).
- **Posters**
 - Sophie Aimon, **Tongqiu Jia**, Terrence J. Sejnowski, Ralph J. Greenspan. Network models of whole brain activity in behaving adult Drosophila. Program No.152.10.2018 Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, 2018. Online.

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 SARS-CoV2 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
 - Troubleshoot 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++, MATLAB, JavaScript
- **Bioinformatics Tools:** GATK, PLINK, bamtools, BWA
- **Machine Learning:** Scikit-learn, Tensorflow, PyTorch
- **Image Processing:** Scikit-image, Nilearn, ImageJ
- **Language:** English, Mandarin