Tongqiu (Iris) Jia

t1jia@uw.edu
https://tongqiu-jia.github.io

Education

- **University of Washington (UW)**
  MPH in Epidemiology — Sept 2020 - Present

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

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 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).
- **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

- **Graduate Research Assistant, University of Washington** — Jun 2021 – Present
  Mentor: Prof. Sara Lindstroem
  - Conducted research on genetics data from CFAR Network of Integrated Clinical Systems (CNICS) cohort, with focus on genetic diversity in the HLA region.
- **Graduate Research Assistant, University of Washington** — Dec 2020 – Jun 2021
  Mentor: Prof. Janet Baseman
  - Participated the evaluation of 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: Prof. 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: Prof. 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: Prof. 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 Sept 2020 - Dec 2020
  Instructor: Brandon Martin-Anderson
- **Teaching Assistant** Summer Institute in Statistical Genetics, UW
  Pathway and Network Analysis for Omics Data July 2020
  Instructor: Professor 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 Intermediate:** Python, Unix, Git
- **Programming Basic:** R, JAVA, SQL, C++, Matlab, JavaScript, React
- **Bioinformatics Tools:** GATK, PLINK, bamtools, BWA
- **Machine Learning:** Scikit-learn, Tensorflow, PyTorch
- **Image Processing:** Scikit-image, Nilearn, ImageJ
- **Language:** English, Mandarin