Tongqiu Jia

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EDUCATION

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

EXPERIENCE

- **Application Programmer, Ideker Laboratory, UCSD**   Aug 2018 – Present
  Mentors: Prof. Trey Ideker, Dr. Daniel Carlin
  - Implement network-based GWAS method and distribute corresponding software and web interface
  - Develop network-based GWAS methods for cross-species translation and shared disease mechanism discovery
  - Analyze genotype array and whole exome sequencing data for variants discovery in metabolic diseases
- **Undergraduate Research Assistant, Ideker Laboratory, UCSD**   Sept 2016 – Aug 2018
  Mentors: Prof. Trey Ideker, Dr. Daniel Carlin. Dr. Justin Huang
  - Participate Python software package development of Network Based Stratification algorithm (pyNBS)
  - Characterize 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
  - Process and analyze large fruit fly whole brain image and behavioral datasets
  - Automate and optimize fruit fly whole brain imaging data and behavioral data analysis pipeline
- **System Administrative Assistant, Recreation Department, UCSD**   Oct 2015 – Apr 2017
  - Troubleshoot computer software issues and set up operating systems and software on new computers
  - Maintain website (recreation.ucsd.edu) and publish web page updates under supervision
- **Volunteer, Hamilton Glaucoma Center, Shiley Eye Institute, UCSD**   May 2015 – Oct 2016
  - Perform tasks related to data collection and database entry in accordance with established protocols
  - Interact with patients prior to their appointment in preparation for their visits

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). doi.org/10.1111/ahg.12383
  - 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* 17, no. 2 (2019): e2006732.
  - Justin K. Huang, **Tongqiu Jia**, Daniel E. Carlin, and Trey Ideker. "pyNBS: a Python implementation for network-based stratification of tumor mutations." *Bioinformatics* 34, no. 16 (2018): 2859-2861.
- **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.

SKILLS

- **Programming Intermediate:** Python, Unix, Git
- **Programming Basic:** Java, R, C++, Matlab, JavaScript, React, SQL
- **Bioinformatics Tools:** BWA, GATK, PLINK,
- **Machine Learning:** Scikit-learn, Tensorflow, PyTorch
- **Image Processing:** Scikit-image, Nilearn, ImageJ
- **Language:** English, Mandarin