

Isaac Wong

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EDUCATION

University of Rochester

Bachelor of Science in Computational Biology

Bachelor of Arts in Computer Science

Concentration in Artificial Intelligence and Machine Vision

- GPA 3.52 out of 4.00
- Dean's List 4 of 6 semesters
- Dean's Scholarship, 2015 – 2019

Rochester, New York

Anticipated May 2019

RELEVANT COURSES AND LABS

- Organic Chemistry with Lab, Genetics with Lab, Biochemistry, Biostatistics with Lab, Molecular Biology, Biology of Aging, Computational Biology with Lab
- Data Structures & Algorithms, Discrete Mathematics, Computational & Formal Systems, Artificial Intelligence, Computer Vision, Linear Algebra with Differential Equations

RESEARCH EXPERIENCE

Freie Universität – Department of Biochemistry

Berlin, Germany

Research under Dr. Helge Ewers, DAAD RISE Fellowship

May 2018 – August 2018

- Created tools for analysis of single particle tracking super resolution microscopy data. Worked on magnetic control of magnetic nanoparticles inside living cells using super resolution microscopy.

University of Rochester – Department of Biology

Rochester, New York

Independent Research under Dr. Amanda Larracuente

September 2017 – May 2018

- Worked on a computational model for satellite DNA evolution in *Drosophila melanogaster* with a focus on the 359bp 1.688 family. Created pipeline for and measured copy number variations of satellite DNA across unique loci of an individual and between individuals of the same and different populations. Looked for associations between copy number and expression level of nearby genes.

University of Rochester – Department of Biology

Rochester, New York

Independent Research under Dr. Amanda Larracuente

January 2017 – September 2017

- Assisted in computational analysis, construction of genome assembly, and genome annotation of multiple firefly species with a focus on repetitive elements.
- Developed the first protocol for Fluorescent *in Situ* Hybridization to firefly chromosomes and imaged the first karyotype showing probe hybridization to canonical telomere sequence.
- Fallon, Timothy R, et al. "Firefly Genomes Illuminate Parallel Origins of Bioluminescence in Beetles." 2017, doi:10.1101/237586.

POSTER PRESENTATIONS

- Isaac Wong, "A Method for Fluorescence *in Situ* Hybridization to Firefly Chromosomes." Annual Undergraduate Program in Biology & Medicine Poster Session. Rochester, New York, 2017.
- Arif Kodza, Isaac Wong, "Complex Satellite DNA variation within and between populations of *Drosophila melanogaster*," 59th Annual Drosophila Research Conference, Philadelphia, PA, 2018.

CO-CURRICULAR AND LEADERSHIP EXPERIENCE

Men's Club Volleyball, University of Rochester

Rochester, New York

Libero

August 2015 – Present

- Organized and lead the team's defensive strategies, placed 3rd in 2016 Division Championship, 2nd in 2017 Division Championship, and 4th in 2018 Division Championship.

Hult Prize, Singapore Regional Finalist

Rochester, New York

Team UR Connected

November 2017 – March 2018

- Developing a social enterprise to improve the lives and health outcomes of older adults by creating a unified digital platform which facilitates access to social events, volunteering opportunities, and community resources.

SKILLS

- Fluorescent *in situ* Hybridization, Fluorescence microscopy and image processing, PCR, gel electrophoresis, DNA extraction, Southern blot, cell culture
- Proficient in Java, C, R. Familiar with Python, Perl