

Jonathan W. Chen

CONTACT INFORMATION	Ph.D. Student, Wong Lab Department of Bioengineering University of California, Los Angeles	<i>Phone:</i> (925) 818-1006 <i>E-mail:</i> jwhc@ucla.edu <i>Social:</i> LinkedIn GitHub
RESEARCH INTERESTS	Applications of machine learning, human-in-the-loop learning, computer-assisted decision making, Bayesian methods, and active learning in medicine and biological systems.	
EDUCATION	University of California, Los Angeles , Los Angeles, California, USA Ph.D. Student, Bioengineering. Advisor: Professor Gerard C. L. Wong, PhD. Washington University in St. Louis , St. Louis, Missouri USA B.S. and M.S. Candidate, Computer Science with second major in Genomics and Computational Biology and minor in Bioinformatics. May 2020. <ul style="list-style-type: none">• Thesis Topic: “Rapid Generalized Psychometric Function Estimation with Active Learning”• Advisor: Professor Dennis Barbour, MD, PhD.	
AWARDS AND HONORS	Academic Dean’s List, Spring 2018 Teaching Computer Science and Engineering: Outstanding Senior Award, Spring 2019	
ACADEMIC EXPERIENCE	Washington University in St. Louis , St. Louis, Missouri USA <i>Graduate Student</i> June 2018 - June 2020 Laboratory of Sensory Neuroscience and Neuroengineering <i>PI:</i> Dennis Barbour <ul style="list-style-type: none">• Led a project to develop active multi-dimensional, general psychometric function estimation with Gaussian Processes and Bayesian active learning. This includes the generalization of error function likelihood for guess and lapse rate classification problems and the extension of an existing uncertainty estimation function. <i>Head Teaching Assistant</i> August 2018 - June 2020 (1) Introduction to Data Science (2) Cloud Computing and Big Data <ul style="list-style-type: none">• Sharing administrative responsibilities with faculty instructor, fielding of student inquiries (120+ students), and coordinating a team of 10-15 undergraduate student teaching assistants and graders.• Proposing, creating, and updating homework and in-class lab assignments. Grading of homework and exams. <i>Student Researcher</i> January 2017 - December 2017 Ding Lab <ul style="list-style-type: none">• Mined 11,000 cancer patient tumor genomes to study rare copy number variants and mutagenesis mechanisms.• Automated and scaled analysis pipeline to be run either locally or on an IBM LSF computing cluster. <i>Teaching Assistant</i> January 2017 - May 2018 Computer Science II <ul style="list-style-type: none">• Assisted with lab studios and answered questions during office hours. Also helped grading of homework and exams.	

PROFESSIONAL
EXPERIENCE

IBM, San Jose, California USA

Senior Software Engineer, Intern

June 2019 - August 2019

- Undertook user-facing web application development for a one-stop-shop, AI pipeline component sharing platform.
- Collaborated closely with AI and backend engineers to implement a user-interface exposing Kubeflow backend with React.

Stentor Technology, Walnut Creek, California USA

Full Stack Developer

June 2017 - December 2017

- Led the development and deployment of a token value exchange system via Solidity contract for Ethereum blockchain.
- Designed client-facing mobile app for customers to manage their token assets, including authentication, marketplaces, and transfer interfaces using React Native.
- Engineered robust REST APIs using Node.js and Express.js to interface between Transact-SQL database and front-end interfaces.

PUBLICATIONS

3. Calvin K. Lee, William C. Schmidt, Shanice S. Webster, **Jonathan W. Chen**, George A. O'Toole, and Gerard C. L. Wong. Broadcasting of amplitude- and frequency-modulated c-di-GMP signals facilitates cooperative surface commitment in bacterial lineages. *PNAS*. 2022
2. **J.W. Chen**, T. Larsen, M. Neumann. Exploring Unfairness and Bias in Data. *Proceedings of the AAAI Conference on Artificial Intelligence*. 2020.
1. M. Neumann, **J.W. Chen**. Introduction to Python for Data Science. *Proceedings of the AAAI Conference on Artificial Intelligence*. 2019.