

# Maggie Wang

## EDUCATION

- 2021 - **Stanford University**, Stanford, CA  
PhD Biomedical Data Science  
Advisor: Dr. Michael Baiocchi
- 2017 - 2021 **Johns Hopkins University**, Baltimore, MD  
BS Biomedical Engineering, BS Computer Science (double major)

## RESEARCH EXPERIENCE

- 2022 - **Stanford University**, Stanford, CA  
*PhD student, supervised by Dr. Michael Baiocchi*  
Developing methods in experimental design for behavioral interventions. [Po, Po, Wo]
- 2021 - 2022 **Stanford University**, Stanford, CA  
*PhD student (rotation), supervised by Dr. James Zou and Dr. Jonathan Chen*  
Designed and conducted a user study to demonstrate how concept bottleneck models can be edited to improve performance on out-of-distribution data [pcbm:p2s22, Jo]. Conducted an observational study using national health claims data to reveal gaps in nephrology care for high-risk patients with chronic kidney disease [Jo].
- 2018 - 2021 **Johns Hopkins University**, Baltimore, MD  
*Undergraduate researcher, supervised by Dr. Michael Miller*  
Developed surface registration methods for modeling hippocampus thickness. Applied regression methods to model the relationship between brain atrophy and genetic indicators in Huntington's disease [Jo].
- 2018 - 2021 **École Normale Supérieure, Paris-Saclay**, Cachan, France  
*Summer research intern, supervised by Dr. Alain Trouné*  
Adapted the "surface registration via currents" algorithm to construct flattened hippocampus thickness maps. Used these maps to visualize hippocampal thinning in patients with Alzheimer's disease.
- 2018 **Canary Center for Early Cancer Detection**, Stanford, CA  
*Summer research intern, supervised by Dr. Sharon Hori*  
Used machine learning to identify aggressive cancer from longitudinal blood biomarker trajectories [Po].
- 2017 - 2018 **Johns Hopkins University**, Baltimore, MD  
*"ProgKnowsis" design team member, supervised by Dr. Raimond Winslow*  
Developed a sparse dictionary representation learning algorithm that computes a predictive risk score for pediatric acute respiratory distress syndrome.

## PUBLICATIONS

### JOURNAL & CONFERENCE PAPERS

- [Jo] Chin-Fu Liu, Laurent Younes, Xiao Tong, Jared T. Hinkle, **Maggie Wang**, et al. “Longitudinal Imaging Highlights Preferential Basal Ganglia Circuit Atrophy in Huntington’s Disease”. *Brain Communications* (2023). DOI: [10.1093/braincomms/fcad214](https://doi.org/10.1093/braincomms/fcad214).
- [Jo] Mert Yuksekgonul, **Maggie Wang**, and James Zou. “Post-hoc Concept Bottleneck Models”. *ICLR* (2023). arXiv: [2205.15480](https://arxiv.org/abs/2205.15480).
- [Jo] **Maggie Wang**\*, Samson Peter\*, Chi Chu, Delphine Tuot, and Jonathan Chen. “Underutilization of Nephrology Referral at High Kidney Failure Risk Levels”. *JAMA Network Open* (2022). DOI: [10.1001/jamanetworkopen.2022.25797](https://doi.org/10.1001/jamanetworkopen.2022.25797).

### PREPRINTS

- [Wo] René Kizilcec **Maggie Wang** and Michael Baiocchi. “Inspection-guided Randomization: A Flexible and Transparent Restricted Randomization Framework for Better Experimental Design”. *arXiv* (2024).

### POSTERS & INVITED TALKS

- [Po] René Kizilcec **Maggie Wang** and Michael Baiocchi. “Inspection-guided Randomization: A Flexible and Transparent Restricted Randomization Framework for Better Experimental Design”. *American Causal Inference Conference* (2024).
- [Po] **Maggie Wang** and Michael Baiocchi. “Designing Randomized Experiments for Behavioral Interventions Under Interference and Context-Dependence”. *Stanford Causal Science Conference* (2023).
- [Po] **Maggie Wang**, Sam Gambhir, and Sharon Hori. “Early Detection of Aggressive Cancer Using Longitudinal Biomarker Measurements”. *Early Detection of Cancer Conference* (2018).

## AWARDS & HONORS

- 2023 **National Science Foundation Graduate Research Fellowship**  
5-year fellowship with three years of financial support awarded to roughly 2,500 graduate students in STEM
- 2021 **Stanford Graduate Fellowship, Smith Fellow**  
3-year support awarded to roughly 100 outstanding Stanford graduate students in science and engineering
- 2020 **Tau Beta Pi Engineering Honor Society**  
Membership granted to top eighth of juniors at Johns Hopkins majoring in an engineering discipline
- 2019 **Alpha Eta Mu Beta Biomedical Engineering Honor Society**  
Membership granted to top fifth of juniors at Johns Hopkins majoring in biomedical engineering
- 2019 **Provost’s Undergraduate Research Award**  
\$3000 funding awarded to 40 Johns Hopkins undergraduates to conduct independent research
- 2019 **Vredenburg Travel Scholarship**  
\$8000 funding awarded to 10 Johns Hopkins undergraduates to pursue research abroad
- 2017 **Hodson Trust Scholarship**  
4-year merit-based scholarship awarded to 20 Johns Hopkins undergraduates covering half-tuition

## TEACHING EXPERIENCE

- Fall 2023 **Graduate Teaching Assistant**, BIOMEDIN 215: Data Science for Medicine, Stanford University  
Fall 2022 **Graduate Teaching Assistant**, BIOMEDIN 215: Data Science for Medicine, Stanford University  
Fall 2020 **Undergraduate Teaching Assistant**, EN.601.433: Introduction to Algorithms, Johns Hopkins University  
Fall 2019 **Undergraduate Teaching Assistant**, EN.580.243: Linear Signals and Systems, Johns Hopkins University

## LEADERSHIP & MENTORSHIP EXPERIENCE

- 2023 **Mentor**, Stanford Biosciences NSF Graduate Research Fellowship Peer-to-Peer Mentoring Program  
*Stanford University*  
Mentored an applicant for the 2024 NSF GRFP cycle, providing multiple rounds of feedback on their personal statement and research statement.
- 2021 - 2023 **Mentor & Organizer**, Stanford Biomedical Data Science Peer-to-Peer Application Mentoring Program  
*Stanford University*  
Provided feedback on essay drafts for prospective MS and PhD applicants who identified as underrepresented minorities. Organized mentor recruitment and mentor-mentee matchings (2022-2023).
- 2022 - 2023 **Vice President**, InterVarsity Graduate Christian Fellowship  
*Stanford University*  
Planned themes and speakers for general body meetings, organized and led musical worship, planned New Student Orientation events.
- 2022 **Mentor**, Community College Outreach Program Bootcamp  
*Stanford University*  
Met weekly in a virtual small group format with community college students seeking to transfer into 4-year programs. Provided advice on essays, internships, and resumes.
- 2020 - 2021 **Mentor**, Women Mentoring Whiting  
*Johns Hopkins University*  
Met bi-weekly with mentee to offer guidance on navigating college as a woman in engineering.