

Catherine Yu- Chi Chen
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EDUCATION

Stanford University, Stanford, CA September 2022 – June 2027 (Expected)
Doctor of Philosophy, Institute for Computational and Mathematical Engineering (ICME)

Columbia University, Columbia College, New York, NY September 2018 – May 2022
Bachelor of Arts, Data Science (*Cum Laude*, *Statistics Departmental Honours*)

HONOURS

Dean's List, Columbia University (All semesters, excluding COVID-affected semesters)

TEACHING EXPERIENCE

Stanford University, ICME September 2023 – Present
Teaching Assistant, Ordinary Differential Equations

Columbia University, Mathematics Department September 2021 – December 2021
Teaching Assistant, Calculus II

RESEARCH EXPERIENCE

Stanford University, Statistics November 2023 – Present
Research Assistant, Advisor: Lihua Lei

- Risk control for LLMs, in particular, conditional value at risk (CVaR)

Stanford University, Management Science & Engineering March 2023 – Present
Research Assistant, Advisor: Markus Pelger

- Uncertainty quantification of machine learning models for financial applications

Columbia University, Center for Theoretical Neuroscience September 2021 – June 2022
Undergraduate Research Assistant, Advisor: Liam Paninski

- Performed behavioral segmentation for classifying animal behaviors via semi-supervised sequence model

Columbia University, Digital Video and Multimedia (DVMM) Lab September 2020 – August 2021
Undergraduate Research Assistant, Advisor: Shih-Fu Chang

- Contributed to *NYCSmart*, a social media analysis project sponsored by the NYC Mayor's Office
- Implemented computer vision techniques for event and sentiment detection of 700,000+ images
- Conducted multimodal topic modeling of images using text features of 7+ million tweets

WORK EXPERIENCE

Google July 2020 – August 2020
Software Product Sprint: Machine Learning Participant

- Designed and generated a book recommendation system using machine learning algorithms

Point Robotics Medtech Inc. July 2019 – August 2019
Software Engineering Intern

- Assisted in creating surgical robots by developing software for the start-up company
- Developed programs for 3D image reconstruction of 2D images of the spine

PUBLICATIONS

- Whiteway M., Wu A., Bramel M., Buchanan K., Chen C., Mishra N., Schaffer E., Villegas A., Paninski L. *Semi-supervised sequence modeling for improved behavioral segmentation*. CoSyNe, 2022.

RESEARCH INTERESTS

- Combating situations in which machine learning algorithms fail: anomaly detection, uncertainty quantification, distribution shifts, and out-of-distribution detection.