# Jasmine Talia Stone

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## Education

**Columbia University, New York, NY**: **Ph.D. Student in Neurobiology and Behavior** Deferred Entry to August 2021

**University of Cambridge, Churchill College, Cambridge, UK**: **M.Phil. in Engineering** Expected August 2021

- Advisor: Guillaume Hennequin
- Supported by the Simpson Churchill Scholarship

**Yale University, New Haven, CT**: **B.S. Computer Science**—GPA: 3.94 (4.0 and Distinction in Major) May 2020

- Phi Beta Kappa
- Magna Cum Laude
- Thesis: *PsychRNN: An open-source Python package for training artificial recurrent neural networks on cognitive tasks.*

**Liberal Arts and Science Academy (LASA), Austin, TX**—GPA: 4.56 May 2016

- Presidential Scholar Semifinalist,
  International competition for Genetically Engineered Machines (iGEM) Gold Medal

## Awards and Scholarships

*Churchill Scholarship* (awarded annually to 16 Americans, funds 1 year Masters at University of Cambridge) 2020
*Saybrook Fellow's Prize* (Yale's Saybrook College recognizes 2-3 seniors' intellectual achievement annually) 2020
*Hertz Finalist* (one of 41 finalists for the prestigious Hertz Fellowship providing STEM PhD funding) 2020
*Barry Goldwater Scholar* (awarded annually to rising juniors and seniors for research excellence) 2019
*Saybrook College Research Grant* (awarded for independent research triannually by Yale's Saybrook College) Spring & Fall 2019
*Saybrook College Mellon Senior Research Grant* (supports seniors' research and presentation to peers) 2019
*Cosyne Mentorship Grant* (awarded by Cosyne, a premiere neuroscience conference, to sponsor attendance) 2019
*National Center for Women in Technology (NCWIT) Collegiate Award Finalist* (awarded to 74 nationally) 2019
*Betty Stevens-Frecknall Scholarship* (national award given to 2-8 people annually majoring in computing) 2018
*Women Forward in Technology Scholarship* (national award given to ~10 women annually) 2017
*Benjamin F. Barge Prize* (awarded annually by the Yale Math Department for excellence in mathematics) 2017
*Eli Lilly / BDPA Scholarship* (awarded to 3 nationally for academic and service excellence) 2017
*Grace Hopper Conference Student Scholarship* (awarded internationally by the Anita Borg Institute) 2017
*Microsoft Scholarship Award Recipient* (international award given for leadership and academic excellence) 2017
*Aspirations in Computing Award, Central Texas Affiliate* (awarded by NCWIT annually) 2014/15/16

## Publications and Posters

*Ehrlich, D. B., *__Stone, J. T.__, Brandfonbrener, D., Atanasov, A., & Murray, J. D. (2020). PsychRNN: An Accessible and Flexible Python Package for Training Recurrent Neural Network Models on Cognitive Tasks. ENeuro. https://doi.org/10.1523/ENEURO.0427-20.2020 (* indicates equal contribution)

**Stone J.**, Ehrlich D., Atanasov A., Brandfonbrener D., Murray J. (2019). *PsychRNN: An open-source Python package for training artificial recurrent neural networks on cognitive tasks.* Poster presented at Society for Neuroscience Meeting (SfN 2019), Chicago, IL, USA. Also presented as a poster at Neuromatch 2.0 (2020) and as a talk at Neuromatch 3.0 (2020).

Berens P., Freeman J., [and 25 others including **Stone, J.**] (2018). *Community-based benchmarking improves spike rate inference from two-photon calcium imaging data.* PLoS Comput Biol 14(5): e1006157. https://doi.org/10.1371/journal.pcbi.1006157

**Stone, J.** (2017) *My Brother's Sister.* Yale Herald, Literary Edition. https://yaleherald.com/my-brothers-sister-36627117c2a7

Berens, P., Theis, L., **Stone, J.**, et al. (2017). *Standardizing and benchmarking data analysis for calcium imaging.* Poster presented at Computational and Systems Neuroscience Meeting (COSYNE 2017), Salt Lake City, UT, USA.

**Stone, J.**, Bonnen, K., Huk, A., & Cormack, L. (2016). *Manual target tracking reveals a perceptual asymmetry between crossed and uncrossed disparities.* Journal of Vision, 16(12), 840-840. Poster presented at Vision Sciences Society Symposium and Workshop on Natural Environments Tasks and Intelligence 2016.

## Patents

**Stone, J.,** et. al. 2020. NEUROMUSCULAR CONTROL OF AN AUGMENTED REALITY SYSTEM. U.S. 20200097081, filed Sept. 20, 2019, and issued Mar. 26, 2020. (Worldwide Patent)

Mao, Q., **Stone, J**. et. al. 2020. NEUROMUSCULAR CONTROL OF PHYSICAL OBJECTS IN AN ENVIRONMENT. U.S. 20200097083, filed Sept. 26, 2019, and issued Mar. 26, 2020. (Worldwide Patent)

## Research

**Cambridge University, Engineering:** Prof. Guillaume Hennequin's Lab 2020-Present

- Improving speed and performance of Gaussian Process Factor Analysis (GPFA) methods on electrophysiology and calcium-imaging data.

**Yale University, Psychiatry:** Prof. John Murray's Lab 2017-2020

- Implemented new features, polished, documented, and released open source package, PsychRNN, for modeling cognitive tasks using recurrent neural networks.

**CTRL-Labs, Interactions Team:** Intern Summer 2018/19

- Designed, implemented, executed, and analyzed multiple experiments with more than 80 human subjects to evaluate cursor control and gesture detection using CTRL-labs' neural interface.
- Decreased gesture detection latency by 80ms, built benchmarks to determine which gestures to ship.
- Collaborated with and organized work across multiple teams.
- Owned patent communication with an external legal team on one patent on which I am an inventor.
- Outreach: Organized and ran multiple recruiting events; Demoed at Microsoft Research.

**Yale University, Applied Math:** Prof. Gal Mishne's Lab Spring 2018

- Initiated and worked on computational vision project to automate whisker tracking and paw tracking of mice in order to facilitate data analysis and classification.

**Janelia, Howard Hughes Medical Institute**: Dr. Jeremy Freeman's Lab Summer 2016

- Compared calcium ion imaging analysis algorithms and modified them to be universally usable.
- Developed supervised learning algorithm for analysis.

**University of Texas (UT), Neuroscience**: Prof. Lawrence Cormack's & Prof. Alexander Huk's Lab 2014-2019

- Programmed, ran, and analyzed Matlab experiments for 3D motion tracking.

**Technion – Israel Institute of Technology:** Scitech Program Summer 2014

- Researched viability of amniotic epithelial stem cells: Best Presentation Award.

## Teaching

**The Coding School:** CodeConnects Teacher 2020-Present

- Teach 1:1 & develop curriculum for high school students learning Python and Data Science.
- Volunteered 40+ teaching hours (as of December 2020).

**Neuromatch Academy (online school in computational neuroscience):** Teaching Assistant July 2020

- Taught, advised on projects, & moderated 9 undergrads and graduates in a 3 week intensive course.

**Yale Computer Science, Data Structures Class:** Undergraduate Learning Assistant Fall 2017

- Held office hours for students taking Data Structures, a required class for the major.
- Clarified problem set specifications, graded exams.

**SheCode:** Volunteer Teaching Assistant 2017-18

- Guided middle/high school girls through first python modules.
- Individualized attention across approximately ten students at a time, each with specific needs.

## Service

**Black Undergraduate Mentorship Program in Biology at Columbia University:** Research Mentor 2021-Present

- Assist mentee with the summer research opportunity application process, edit CV, and provide general advice on managing the application process.

**Project SHORT:** Pro-Bono Ph.D. and Fellowship Application Mentor 2020-Present

- Assist with school selection, edit CVs, and provide general advice to applicants with diverse experiences to combat socioeconomic and systemic inequalities in graduate admissions.

**International Precollege Association for Research in STEM:** Advisor Jun-Dec 2020

- Advise 5 mentors, address questions and concerns as they arise.

**Yale School of Engineering & Applied Science:** Student Review Committee for the Ackerman Award Apr 2020

- Selected by the Computer Science department to select the recipient for the Ackerman Award for Teaching & Mentoring.

## Other Work Experience

**Google, Next Billion Users:** Engineering Practicum Intern Summer 2017

- Designed and created an Android app focused on emerging markets.
- App enabled data collection on over 1,500 hotspots in India, Brazil and Indonesia, providing the dataset for a supervised learning algorithm that has greatly improved network quality reports.

**Yale Symphony Orchestra:** Stage Crew Spring 2017

- Set up and cleaned up chairs, stands and anything else needed for rehearsals and concerts.

## Other Leadership

**Yale Synchronized Swimming:** Founding Member 2017-2020

- Initiated team formation by registering with national governing body of synchronized swimming.
- Recruited founding team members and leadership team.
- Advised leadership team on Club Sports relations, resources, and rules.

**Yale Women's Water Polo:** Travel manager (Elected) 2017-18

- Organized move-in fundraiser, raising over $800 for the team of approximately 14 people.
- Organized travel arrangements for 2 away competitions and a week-long training trip to Austin, TX; Obtained pool time; Organized scrimmages; Recruited two coaches for the duration of training trip; Arranged housing, transportation, and meals.
- Ensured travel complied with Yale Club Sports regulations.

## Other Event Participation

Jane Street's Software Development INSIGHT Program: Introduced to OCaml and trading. Jan 2017

HackMIT: Made therapy tool for patients and doctors using Firebase and Leap Motion. Fall 2016

## Skills and Interests

Technology: Python, Git, TensorFlow, Jupyter Notebooks, MATLAB, C, Java, Racket, Cuda, OpenMPI, OpenMP

Foreign Languages: Hebrew (conversational), Spanish (proficient)

Athletics: Yale Synchronized Swimming, Yale Women's Water Polo, Nationally Ranked Synchro Swimmer 2006-Present

Violin: Cambridge University Symphony Orchestra, Yale Symphony Orchestra, Texas All-State Orchestra 2002-Present