

School Address:  
233 Massachusetts Ave  
Cambridge, MA 02139

**Quilee Simeon**  
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Home Address:  
528 Beacon Street  
Boston, MA 02215

## EDUCATION:

### Massachusetts Institute of Technology (MIT)

*Candidate for S.B. in Computation and Cognition, 4th Year; GPA: 4.8/5.0*

*Candidate for M.Eng. in Computation and Cognition, 1st Year; GPA: 4.8/5.0*

**Relevant Coursework:** Artificial Intelligence, Machine Learning, Machine Motivated Human Vision, Neural Computation, Computational Cognitive Science, Statistics for Brain Research, Microeconomics, Linear Algebra, ...



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## RESEARCH EXPERIENCE:

### MIT Undergraduate Research Opportunities (UROP), McGovern Institute for Brain Research

*Undergraduate Researcher (Graybiel Laboratory)*

- Implemented sustainable cloud storage protocol for syncing large quantities of sensitive experimental data.
- Implemented behavioral apparatuses for cognitive assays in mice; Involved the construction of Arduino electronics and fabrication of hybrid electrophysiological neural interfaces.
- Applied experimental systems neuroscience approaches to the study of a mouse model of Huntington's disease.
- Analyzed behavioral data for experimental mice to determine effects of novel therapeutics.
- Wrote image analysis programs for analyzing neuronal cytoarchitecture in histological sections of the striatum.
- Built semi-automated animal behavior analysis pipeline making use of advanced imaging and machine learning techniques. Software: DeepLabCut, MATLAB, Docker, etc. Hardware: Arduino-based circuits, Raspberry Pis, etc
- Working on pilot SHANK3 animal models of Autism Spectrum Disorder (ASD) research. This is ongoing seminal work that involves the combined efforts of multiple research labs across the United States.
  - Currently applying computer vision models involving DeepLabCut to analyze stereotyped and repetitive behaviors in animal models of SHANK-protein mediated ASD.

Cambridge, MA  
June 2018 — present

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## WORK EXPERIENCE:

### MIT Admissions Office

*Tour Guide*

- Gave campus tours to visitors, parents and prospective students: daily tours during summer, twice weekly during semester.

Cambridge, MA  
June 2018 — Nov 2019

### Triplet Therapeutics

*Bioinformatics Intern*

- Developed web and command line applications for guiding small molecule drug design and development decisions.
- Successfully deployed a neural network model to analyze and accurately predict knockdown efficacy of oligonucleotide molecules with the aim of finding effective drug candidates.

Cambridge, MA  
July 2019 — Sept 2019

### St. Lucia Distillers Ltd.

*Quality Assurance Analyst*

- Performed regulatory tasks aimed at maintaining the company's Hazard Analysis and Critical Control Points (HACCP) certification and preparing the company for an upcoming ISO 2000 certification audit.
- Wrote and revised a lab manual and standard operation procedures (SOPs) manual for distillery and warehouses.
- Evaluated analytical methods and procedures to determine how they might be improved.
- Prepared a trend analysis report of results from product stability/shelf-life testing data.

Castries, St.Lucia  
Sept 2016 — June 2017

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## SKILLS:

**Computer:** Programming in (decreasing order of proficiency) Python, MATLAB, C, PHP, R, SQL;  
machine learning, bioinformatics, statistics, data analysis, expert in Microsoft Excel

**Social/Language:** singing, French (spoken)

**Professional:** public speaking, leadership

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## LEADERSHIP:

### Lab Assistant

*6.009 — Fundamentals of Programming*

- Participated in 2-hour weekly training sessions to discuss weekly course material and upcoming labs.
- Completed laboratory assignments from scratch in advance of release to students.
- Provided students with lab “checkoffs” and help (“debugging” and conceptualizing) during biweekly 3-hour office sessions.
- Responded to students’ questions on online class forum.

Cambridge, MA  
February 2020 — present

### Tutor

*9.40 — Introduction to Neural Computation*

- Hosted weekly tutoring sessions on weekends to answer students’ questions about course material, provide help with problem sets, and practice problems for midterms and final examination.

Cambridge, MA  
February 2020 — present

### Theta Chi Beta Chapter

*Executive — Secretary*

- Maintained list fraternity members to National Headquarters.
- Assigned house duties/responsibilities to active members.
- Recorded minutes of house, exec and alumni meetings.

Boston, MA  
Dec 2018 — Dec 2019

### MIT Black Student Union (BSU)

*Social Chair*

- Worked in a team of five to organize social events aimed at uniting the black/African community at MIT.
- Point-of-contact for guest speakers and performance groups.
- Responsible for maintaining mailing lists and informing members of upcoming events.

Cambridge, MA  
Sept 2018 — June 2019

### MIT Global Teaching Labs (GTL)

*Instructor*

- Taught intro level courses in computer science, neuroscience and neurotechnology to high school from across in southern Africa as part of an independently developed curriculum for the first ever GTL program on the African continent.
- Designed and presented multidisciplinary master classes reflective of the type of critical thinking and problem solving skills required of a lifelong learner: 1) “SSH and Data Processing” - how to set up, gather and process experimental data remotely; 2) “Coding Complexity and Chaos” - combining computer science, art and mathematics; 3) “Neurotechnology” - a seminar about my academic interests and research at the intersection of computation and cognition.

Johannesburg, South Africa  
January 2019

Cardiff, Wales  
January 2020

*MIT-Brazil Student Ambassador*

- I work to forge connections between MIT and the burgeoning biotech industry in Brazil. The aim of this initiative is to foster collaboration between MIT and Brazilian institutions and promote the creation of innovative ideas on the use of biotechnology — especially bioinformatics, which I am passionate about — in Brazil to solve difficult problems in agriculture, pharmaceuticals, etc. through computation.

Austin, TX (remote)  
June 2020 — August 2020

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## MIT CLUBS/ACTIVITIES:

MIT Black Student Union (BSU)  
MIT Caribbean Club  
Theta Chi Beta Chapter

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## SOCIETIES/ORGANIZATIONS:

Caribbean Diaspora for Science Technology and Innovation — New England (CADSTI-NE)  
Theta Chi Fraternity (National)

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**REFERENCES:**

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**Guoping Feng, PhD**

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**Nancy Kanwisher, PhD**

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**Myriam Heiman, PhD**

Latham Career Development Chair  
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and Cognitive Sciences;  
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