

Caleb Trotz

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Education

Brown University, Sc.B. Math-Computer Science (intended)

Providence, RI • Expected Completion: May 2022

Relevant Coursework: *CSCI0320: Software Engineering*; *MATH0540: Honors Linear Algebra*; *CSCI0190: Accelerated Introduction to Computer Science*; *MATH0350: Honors Calculus*

GPA: 4.0/4.0

Acton-Boxborough Regional High School, High School Diploma

Acton, MA • June 2018

Awards: *US Department of Education Presidential Scholar Nominee*; *National AP Scholar*; *National Merit Finalist*; *National Examinee*, *US National Chemistry Olympiad*; *Fred L. Robbins Scholarship*.

Research Experience

Acton-Boxborough Regional High School

Acton, MA • September 2015 – May 2018

BioBuilder (research organization)

Club Officer & Researcher

- Designed cellulolytic and ligninolytic plasmid for E. coli transformation
- Co-investigated E. coli with the ability to dissolve wood splinters in 2016 and 2018
- Co-investigated E. coli-based ethanol detection in 2017
- Published 3 papers (2016, 2017, 2018)
- Learned lab skills including genetic transformation and biochemical analysis techniques

Harvard Medical School

Cambridge, MA • Summer 2017

Research Assistant

- Investigated two *S. cerevisiae* gene deletions for lifespan phenotypes under the direction of Christopher Burtner, PhD.
- Performed polymerase chain reaction (PCR), Bio-Screen lifespan assay, and gel electrophoresis.

Technical Experience

Center for Computation and Visualization, Brown University

Providence, RI • September 2018 – December 2018

Provides high-throughput computing capabilities to the Brown community.

Intern

- Assist in transition from CentOS 6 system to RedHat 7 system.
- Conduct research projects on scheduling and power efficiency in the supercomputing cluster.

MIT Beaver Works Summer Institute

Cambridge, MA • Summer 2018

Introduces high school students to state-of-the-art robotics applications.

Robotics Instructor

- Co-taught a four-week course in autonomous unmanned aerial vehicle (UAV) racing.
- Developed course content (including 9 instructional modules).
- Implemented technical capabilities for the Intel Aero RTF drone platform (including GPS-denied localization, motion planning, and obstacle detection).

Leadership and Engagement

Sexual Health Awareness Group

Brown University • January 2018 – present

Peer Educator

- Advise peers on pleasure, intimacy, and sexual health matters.
- Teach at SHAG events and workshops.
- Respond to anonymous SMS questions.

Brown-RISD Hillel

Brown University • December 2018 – present

Holidays Co-Chair

- Plan and execute holiday celebrations for the College Hill Jewish community.
- Work in collaboration with other Hillel chairs, the Hillel executive board, and staff members to create programming.

Skills and Interests

Technical: UNIX/Linux, Python, Java, MATLAB (familiar), Racket (familiar), JavaScript (familiar), HTML/CSS, Microsoft Office, Google Apps

Non-Technical: French (advanced proficiency), Trivia/Quiz Bowl, Weightlifting, Film, Politics, LGBTQ+ Activism, Public Health/Health Policy