Elias A. Berkowitz

www.eliasberkowitz.com

EDUCATION

• Bard College: Annandale-on-Hudson, NY Masters of Arts in Teaching

Sept 2019 - Present (on leave)

Email: eliberkowitz@gmail.com

Github: github.com/berkowitze

• Brown University: Providence, RI Bachelors of Science in Applied Mathematics Sep 2015 - May 2019

Projects

- Bard College Citizen Science: Wrote a web application to allow several hundred students and faculty to upload, manage, and query scientific images and observations. Used Flask hosted on Google Cloud Platform (App Engine, Cloud SQL Postgres, Storage) and ArcGIS for data visualization.
- Brown University Grading App: Wrote software and a web application to manage assignment hand-in and grading for computer science courses at Brown, used by over 500 students in three different courses. Built with Python (Flask).
- Rocketry: Helped start a rocketry club at Brown. Worked on a controller to actuate fins to stabilize the rocket and deploy a parachute at apogee (Arduino). Wrote a web app to facilitate testing different custom-made motors on a thrust test stand (Raspberry Pi, Flask).
- Exosim: Wrote an exoplanet simulator (exosim.netlify.com). Used to-scale physics and 3D rendering to show planetary systems and star light curves as planets obscure them. Allowed customized stars, planets and moons. Built with P5.js.

Work Experience

• Software Developer

Sept 2019 - Jan 2020

Bard College Citizen Science

Head Teaching Assistant, Brown University

Jun - Dec 2018

CSCI 0111 - Computing Foundations: Data

- Course development: Developed assignments for a new introductory computer science course at Brown.
- Leadership: Co-led a team of undergraduate teaching assistants.
- Student Feedback: Received positive feedback from students. Personally scored 1.21 with 1 being the highest score and 5 being the lowest. Course received a 1.48. Written feedback available upon request.

• Teaching Assistant, Brown University

2017 - 2019

Computer Science Department

• CSCI 0170: Computer Science: An Integrated Introduction (part 1).

Fall 2017

• CSCI 0050: A Data-Centric Introduction to Programming.

Summer 2018 Spring 2019

o CSCI 0180: Computer Science: An Integrated Introduction (part 2).

• Mentor, Trip Leader, Manager

Jan 2017 - May 2019

Brown Outdoor Leadership Training (BOLT), Brown University

- o Mentor: Trained leaders in facilitation, mentorship, and technical skills to lead backpacking trips (2018, 2019).
- Leader: Received 200 hours of training to lead a 5 day backpacking trip with 8 college students.

• Research Assistant

Jun - Aug 2017

Fox-Kemper Physical Oceanography Lab, Brown University

• Research: Implemented a numeric stochastic differential equation solver to extend the ocean Stommel model.

• Research Experiences for Undergraduates Student Intern

Jun - Aug 2016

LIGO Scientific Collaboration, Louisiana State University, Dr. Gabriela Gonzalez (mentor)

Baton Rouge, LA

• Data analysis: Characterized transient noise in the LIGO detectors.

• Information Technology Intern

Jun 2015 - Sep 2015

Oakwood Friends School

Poughkeepsie, NY

SKILLS

- Programming Languages: Python, Javascript, Java, Scala, MATLAB, Bash, Arduino (C), Google Apps Script.
- Frameworks: Google Cloud Platform, Flask, Postgres, Github, NodeJS, Docker, p5.js, jQuery, LATEX.
- Languages: Portuguese (fluent), German (beginner level).
- Music: Piano (classical), Flute (classical).