

Mason Price

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415 South St, Waltham, MA 02453

Summary of Skills

- Strong Background in Math and Physics
- Experienced in Python, C, MATLAB, Julia & Bash
- Motivated and Independent learner
- Productive and organized

Experience

Research Assistant – Rogers Lab

March 2023 – Present

Brandeis University, Waltham, MA

- Use DNA origami to assemble nanostructures.
- Use principles from mathematics such as group theory and topology to solve the inverse design problem for new structures.
- Use MATLAB to write an energy minimization script to generate new geometries.
- Use MATLAB to generate professional figures and measure data.
- Use a combination of Python and Bash to run Monte Carlo simulations and analyze data.
- Master experimental techniques such as Gel Electrophoresis and Transmission Electron Microscopy (TEM).
- Present and communicate research at Physics conferences in the form of posters and talks.

Intern – Airborne Radar Analyst

May 2024 – August 2024

National Air and Space Intelligence Center (NASIC), Dayton, OH

- Use physics to perform all-source analysis of radar systems.
- Prepare and present a briefing on a radar system for the Airborne Radar Flight.
- Use Python and specialized tools to model radar systems.

Math Mentor

May 2024 – August 2024

Brandeis University, Waltham, MA

- Guide underclassmen on how to navigate a major in mathematics.
- Prepare a weekly presentation on a chosen topic, including major requirements, extra-curricular activities, and additional opportunities.

Teaching Assistant – Introductory Physics Lab 1 & 2

August 2022 – May 2023

Brandeis University, Waltham MA

- Lead classes with 20 students and hold regular office hours.
- Work closely with students to help them develop an understanding of physics, statistics, and writing.
- Prepare presentations for each class and set up any equipment needed for labs.
- Correct in-class quizzes and written lab reports.

Research Assistant – Sciolla Lab

May 2022 – August 2022

Brandeis University, Waltham, MA

- Assist with analysis of ATLAS data collected during Run-2, using Python and the ROOT data analysis framework.
- Interpret data based on an understanding of particle physics.

Education

Brandeis University

January 2022 – Present

Relevant coursework:

- Introduction to Real Analysis, part I
- Introduction to Real Analysis, part II
- Introduction to Differential Geometry
- Introduction to Topology
- Quiver Representations
- Introduction to Rings and Fields

- Introduction to Algebra, part II
- Algebra I
- University Writing Seminar – Professional Writing in the Sciences
- Quantum Theory I
- Quantum Theory II
- Electromagnetism
- Waves and Oscillations
- Introduction to Thermodynamics and Statistical Mechanics
- Statistical Physics and Thermodynamics
- Advanced Physics Laboratory
- Introduction to Proofs
- Multivariable Calculus
- Applied Linear Algebra
- Applied Linear Algebra Practicum
- Introductory Physics II
- Physics Lab 2

University of Alaska Anchorage

August 2019 – December 2021

Relevant coursework:

- Calculus 2
- College Physics I
- Physics I Lab
- Critical Thinking

Activities

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- Robotics club - Secretary

January 2021 – Present