

Samuel J. Dawley

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Education

Johns Hopkins University

BACHELOR OF ARTS, CHEMISTRY

Advised by Prof. J.D. Tovar

[Baltimore, MD](#)

2019 - 2023 (expected)

Johns Hopkins University

BACHELOR OF ARTS, APPLIED MATHEMATICS & STATISTICS

Focus on Statistics & Statistical Learning

[Baltimore, MD](#)

2019 - 2023 (expected)

Awards & Honors

Dean's List

JOHNS HOPKINS UNIVERSITY

- Dean's list for academic excellence goes to students who earn a term GPA of 3.5 or above in a program of at least 14 credits with at least 12 graded credits.

[Baltimore, MD](#)

All Semesters

Life Design Lab Grant Recipient

JOHNS HOPKINS UNIVERSITY

[Baltimore, MD](#)

2021

Loneragan Award

DOVER-SHERBORN HIGH SCHOOL

- Award given to the two graduating seniors who best exemplify altruism, character, dignity, integrity, and loyalty; the most prestigious award given by the school.

[Dover, MA](#)

2019

Columbia Book Award

DOVER-SHERBORN HIGH SCHOOL

- The Columbia Book Award is presented to "outstanding juniors and seniors at high schools who have demonstrated their commitment to excellence.

[Dover, MA](#)

2018

Professional Development

Research Intern, Platform for the Accelerated Realization, Analysis, and Discovery of Interface Materials

JOHNS HOPKINS UNIVERSITY

- Advanced strategies for real-time data analysis toward achieving autonomous experimental control.
- Used statistical analysis and machine learning to develop an algorithm and programmatic implementation for automatic signal structure and spectral peak detection.
- Implemented methods for live streaming data using Apache Kafka.

[Baltimore, MD](#)

Summer 2022 - Present

Research Assistant, Cheng Lab

JOHNS HOPKINS UNIVERSITY

- Studied high-level computational and theoretical methods in quantum chemistry.
- Used coupled-cluster theory to calculate polarizability of molecular and ionic diatoms.
- Collaborated with experimentalists to confirm results at ultracold temperatures.

[Baltimore, MD](#)

Spring 2022 - Present

Chemistry Student Safety Committee

JOHNS HOPKINS UNIVERSITY

- Addressed safety hazards across departmental facilities and individual labs.
- Attended trainings for development of proper scientific lab safety, management, and conduct.

[Baltimore, MD](#)

Fall 2021 - Present

Research Intern, Medoff Lab

MASSACHUSETTS GENERAL HOSPITAL

- Studied response of airway epithelium cells to lung inflammation for an increased understanding of idiopathic pulmonary fibrosis.
- Created and maintained tissue cultures and imaged using confocal microscopy.
- Developed Python program to analyze and visualize data collected from tissue cocultures.

[Boston, MA](#)

Summer 2021

Research Assistant, Tovar Lab

JOHNS HOPKINS UNIVERSITY

Baltimore, MD

Winter 2020 - Present

- Synthesized and characterized novel organic compounds with hybrid radial and linear conjugation.
- Calculated optimized geometries and molecular orbital energies for compounds using density functional theory.
- Experienced with NMR processing and analysis.

Teaching

Teaching Assistant, Introductory Organic Chemistry Lab

JOHNS HOPKINS UNIVERSITY

Baltimore, MD

Fall 2022

- TBD.

Teaching Assistant, Intermediate Organic Chemistry Lab

JOHNS HOPKINS UNIVERSITY

Baltimore, MD

Spring 2022

- Aided teaching students the fundamentals of practical laboratory research techniques in organic chemistry synthesis and characterization.
- Worked with students to help properly analyze data and observations to develop hypotheses and design experiments to test those hypotheses.
- Facilitated and instructed NMR processing and analysis.

Tutorial Project Tutor

JOHNS HOPKINS UNIVERSITY

Baltimore, MD

Fall 2021

- Provided free support to kids in elementary school with math, reading, and writing in one-on-one tutoring.
- Coordinated with parents of student to ensure personalized support.

Learning Den Tutor

JOHNS HOPKINS UNIVERSITY

Baltimore, MD

Fall 2020 - Present

- Offered personalized tutoring in one-on-one sessions to students in courses including Multivariate Calculus, Organic Chemistry, and Linear Algebra.
- Provided unique notes and problems for students.

PILOT Leader

JOHNS HOPKINS UNIVERSITY

Baltimore, MD

Fall 2020 - Present

- Provide academic support to students in peer-led tutoring sessions within numerous classes, including Multivariate Calculus and Organic Chemistry.
- Responsible for creating problem sets and answer keys each week for all tutoring sessions within the course each semester.
- Coordinated with course instructor to plan and facilitate review sessions and office hours outside of those offered by professor and teaching assistants.

Volunteering

Baltimore City Weed Warriors

VOLUNTEER

Baltimore, MD

2021 - Present

- Participated in efforts to remove non-native invasive plants from local parks in Baltimore.

Best Buddies Foundation

VOLUNTEER

Various

2019 - Present

- Volunteered with kids and adults with intellectual and developmental disabilities in variety of events
- Raised money for organization in events such as Falmouth Road Race and Hyannis Port Challenge.

Pine Street Inn Homeless Shelter

FOOD SERVER

Boston, MA

2018 - 2019

- Helped prepare and serve breakfast to homeless population.
- Cleaned dining area prior to and following meal.
- Organized transport for team of student volunteers.

Exceptional Citizens' Week at Camp Fatima

VOLUNTEER

Gilmanton Iron Works, NH

2015 - Present

- Volunteered at sleepaway camp for kids and adults with intellectual and developmental disabilities.
- Member of team which organized and served meals for entire camp and prepared camp grounds for activities including fairs, parades, and theater productions.

Extracurricular Activities

First-Year Mentor

Baltimore, MD

JOHNS HOPKINS UNIVERSITY

2020

- Supported incoming students in transition from high school to university.
- Trained for and incited discussions about inclusivity and diversity, academic advising, and maintaining proper mental health in college.
- Fostered personal relationships between new students.

Running Club and Cycling Club

Baltimore, MD

JOHNS HOPKINS UNIVERSITY

2019 - Present

Best Buddies Club

Baltimore, MD

JOHNS HOPKINS UNIVERSITY

2019 - Present

- Traveled to and spent time with students at Claremont School in Baltimore which specializes in providing educational services to students with moderate to profound intellectual and developmental disabilities.
- Engaged in after school activities ranging from arts and crafts to football and basketball.

Swim Team, Captain

Dover, MA

DOVER SHERBORN HIGH SCHOOL

2015 - 2019

- Competed for and captain of High School swim team.
- Named All-League Swim and Dive Team MVP in 2019 season.
- Trained and competed on multiple USA Swimming teams.

Swim Coach

Sherborn, MA

RECREATIONAL SWIM LEAGUE

2017 - 2018

- Taught fundamentals of swimming to kids aged 9 to 11 years old.
- Tracked progress of each swimmer and helped in running swim meets.

Presentations

1. **Sam Dawley**, David Elbert, Tyrel McQueen, and Apurva Mehta. "Streaming by Design for Materials Characterization." Presented at: Cornell University. 2022 Aug 10; Ithaca, NY.

Skills & Tools

Experienced Git, \LaTeX , Python

Basic C++, CFOR, Gaussian16, MATLAB