

Zawad Chowdhury

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Education

- 2023 – University of Washington
 - PhD student in Mathematics
- 2019 – 23 Massachusetts Institute of Technology
 - S.B. in Mathematics with Minor in Writing and Computer Science, GPA 5.0/5.0

Research Experience

- 2022 Quantitative Research Intern at Jump Trading
 - Developed execution code for Trading Strategies competition, which beat other teams by 20%.
 - Implemented new models for price prediction pipeline, improving robustness by 25%.
- 2021 Undergraduate Researcher at ICERM
 - Attended Summer@ICERM program for computational research on billiards and flat surfaces.
 - Developed a software package extending Sage's flat surface library.
- 2020 – 21 Undergraduate Research Assistant at Evlab
 - Completed a supervised research project investigating inner voice using fMRI data.

Teaching Experience

- 2023 – Teaching Assistant, UW Math Dept
 - Ran quiz sections and assisted instructor for first year calculus courses.
- 2021 – 22 Undergraduate Assistant: 18.701 (Algebra I)
 - Lead office hours and content review sessions for a 100+ student class.
- 2022 Math Learning Center Tutor
 - Mentored students on upper level math courses.
- 2020 – 21 Lab Assistant: 6.036 Introduction to Machine Learning
 - Lead lab sections and ran office hours for a 200+ student class.

Honors

- 2024 Academic Excellence Award, University of Washington
- 2023 Phi Beta Kappa, Xi Chapter
- 2018 Gold Medal, 59th International Mathematical Olympiad
- 2017 National Champion, 15th Bangladesh Mathematical Olympiad

Publications

- 2021 Zawad Chowdhury, Samuel Everett, Sam Freedman, and Destine Lee. “Computing Periodic Points on Veech Surfaces.” *Geom. Dedicata* 217.4 (2023): 66.
- 2023 Carina Kauf, Anna A. Ivanova, Giulia Rambelli, Emmanuele Chersoni, Jingyuan Selena She, Zawad Chowdhury, Evelina Fedorenko, and Alessandro Lenci. “Event knowledge in large language models: the gap between the impossible and the unlikely.” *Cognitive Science* 47, no. 11 (2023): e13386.

Service & Leadership

- 2021 – 23 MIT Committee on the Undergraduate Program
- Faculty governance committee on undergraduate academic structures, policies and programs.
 - Participated in policy discussions and evaluations of experimental innovations.
- 2020 – 23 MIT Committee on Curricula
- Faculty governance committee overseeing the curriculum of MIT courses.
 - Participated in review of classes and programs being added to the MIT catalog.
- 2022 – 23 President, MIT Dormitory Council
- Lead 15 executive members and 11 dorm presidents in advocating to the MIT Administration.
 - Represented over 3,500 constituents to address issues of student housing, food insecurity and dining services, mental health and student support, diversity and inclusion initiatives.
- 2021 Chair, MIT Educational Studies Program
- Advised and mentored 10 directors of 5 educational programs that in total serve over 4000 middle and high school students each year
 - Directed Splash, a weekend program with 250+ classes for 1300+ high school students, MIT's largest K-12 educational opportunity.
- 2021 Deputy Leader, Bangladesh Team at European Girl's Mathematical Olympiad
- Mentored students and led coordination for Bangladesh's first delegation to the world's largest women's mathematical olympiad.
- 2021 – 23 East Campus Renovations Committee
- Lead a group of 25 students interfacing with administration and the dorm about issues related to the East Campus renovation.
- 2022 MIT East Side Festival Lead Organizer
- Organized the 2022 East Side Festival, welcoming 500 alumni back for a day celebrating East Side culture and history.

Skills and Interests

- Software Python (pandas, numpy, SageMATH), Typescript, Matlab, LaTeX, HTML, CSS.
- Projects Hierarchical Deep Reinforcement Learning as a Model for Free Play, Designed and developed a dynamic website using React.
- Interests Writing (Science Fiction and Fantasy), Tabletop Roleplaying, Education Policy, Community Organizing, Ukulele.