Robin Bowers

they/them
robin.bowers@colorado.edu
robin-bowers.com
January, 2023

Education

University of Colorado Boulder — Boulder, CO
PhD Student, Computer Science — *2021 – present*

Oberlin College — Oberlin, OH
Bachelor of Arts, Computer Science and Mathematics — *2016 – 2020*

University of Edinburgh — Edinburgh, UK
IFSA-Butler Study Abroad, course credits issued via Butler University — *Spring 2019*

Experience

Teaching Assistant – Algorithms — Spring 2022
University of Colorado Boulder — *Boulder, CO*

- Led weekly practice sessions on course topics
- Wrote weekly problem sets and solutions presented in all TA sections
- Graded homeworks and exams

Undergraduate Research Assistant — 2019 – 2020
Oberlin College — *Oberlin, OH*

- Conducted research in economic game theory; Two semesters of course credit, one summer of paid research
- Proved setting-specifc performance lower-bounds for several auction algorithms
- Obtained complexity results on computing lower bounds for performance of auctions in specific settings

Teaching Assistant – Algorithms — 2019 – 2020
Oberlin College — *Oberlin, OH*

- Planned and led twice-weekly algorithms problem sessions on course topics
- Guided students through practice problems, focusing on proof techniques and problem-solving skills
- Transferred problem session material online for distance learning

Research Internship – NSF REU — Summer 2019
University of Arizona Department of Electrical and Computer Engineering — *Tucson, AZ*

- Conducted study on "Machine Learning Based MIMO Equalizer for High Frequency (HF) Communications"
- Created mathematical models of long-range radio systems in MATLAB
- Implemented machine-learning algorithms to dynamically adjust system behavior for best performance
- Communicated professionally with other students to coordinate project and goals

Grader – Discrete Math — Fall 2018, Spring 2020
Oberlin College — *Oberlin, OH*

- Graded homework and quizzes weekly for class size of 30-80 students for in-person and distance learning classes
- Provided written feedback to students on mathematical reasoning and clarity

Software Internship — Summer 2018
Blendid — *Sunnyvale, CA*

- Worked with Universal Robots robotic arm designing and optimizing movement paths in automated food kiosk
- Handled emergency kiosk malfunctions and daily prototype operations

Publications

Machine Learning Based MIMO Equalizer for High Frequency (HF) Communications.
S. Spillane, K. H. Jung, **Bowers**, T. Peken, M. H. Marefat and T. Bose, *2020 International Joint Conference on Neural Networks (IJCNN 2020).*

Posters

High-Welfare Matching Markets via Descending Price
Robin Bowers, Bo Waggoner, Presented at Simons Institute Workshop on Societal Considerations and Applications, 2022.

Awards

Outstanding Teaching Assistant Award 2022
University of Colorado Boulder *Boulder, CO*

Annual CS Department Research Expo – Work In Progress Award 2022
University of Colorado Boulder *Boulder, CO*

2020 R.J. Thomas Computer Science Teaching Assistant Award May 2020
Oberlin College *Oberlin, OH*

John F. Oberlin Scholarship 2016 – 2020
Oberlin College *Oberlin, OH*