xun.ruiran@gmail.com

#### Education

#### Carnegie Mellon University

Pittsburgh, PA

B.Sc. Chemistry, Additional Major in Computer Science

May 2022

Relevant courses: Inorganic Chemistry, Organic Chemistry, Organic Synthesis and Analysis,
Physical Chemistry, Transition Metal Catalysis for Organic and Polymer Synthesis

## Research Experience

#### Carnegie Mellon University

Pittsburgh, PA

Noonan Research Group (Polymer Chemistry)

May 2019 — present

- Conducted research through the CMU Summer Undergraduate Research Apprenticeship
- Investigates novel syntheses of organic cations that functionalize anion exchange membranes
- Utilized standard organic synthesis techniques as well as GPC, H-NMR, and IR analysis

# Boston University

Boston, MA

Porco Research Group (Organic Chemistry)

July 2017 — August 2017

- Conducted studies towards a novel synthesis of indoles with concurrent group migration
- Investigated a new reaction pathway inspired by an unexpected result in mentor's work

## Work Experience

# Carnegie Mellon University School of Computer Science

Pittsburgh, PA

\* Teaching Assistant (15-122: Principles of Imperative Computation) August 2019 — present

- Assists in teaching code correctness, data structures, and algorithms to over 500 students
- Leads lab sessions, facilitating a collaborative and open environment for student learning
- Guides student understanding of concepts and assignments one-on-one during office hours

Expii, Inc. Pittsburgh, PA

Content Writing Intern (Mathematics)

September 2018 — May 2019

- Created and moderated educational content targeted towards high school students
- Authored engaging problems, solutions, and explanations for topics in algebra and geometry
- Assisted in creation of mathematics curricula based upon existing pedagogical research

### Posters

- Studies Towards a Novel Synthesis of Indoles with Concurrent Group Migration 2017
  - Poster based upon work done as an intern at Boston University during the summer of 2017
  - Presented at Poster Symposium for BU's Research in Science & Engineering (RISE) program

# Leadership

## Scotch'n'Soda Theatre

Pittsburgh, PA

Secretary (Board of Directors)

May 2019 — May 2020

- Oversees production of six to seven shows per academic year by over 200 active members
- Communicates key events and information to general membership weekly through emails
- Connects with members of current productions to proactively identify and remedy conflicts

# Skills

- Laboratory: H-NMR, C-NMR, IR, UPLC-MS, GC-MS, GPC
- Coding: C, Java, Python, Mathematica, LATEX, HTML/CSS, Javascript
- Language: Fluent in English and Chinese, conversant in Spanish
- Other: collaborative piano, photography, digital media editing