

Ryan Wong
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Senior, Whitney Young High School, Chicago, Illinois

[github](#) | [linkedin](#) | [website](#)

Motivated student seeking opportunities to engage in Computer Science research. Interested in applying and honing existing skills in programming languages as well as enhancing problem-solving skills through solving pervasive problems in academia and society. Particularly interested in exploring the interdisciplinary uses of CS through distributed systems, scientific computing, parallel processing, and machine learning.

Computer Science Skills and Experiences

Computer programming languages:

- Python
- Java
- Haskell
- Dr. Racket
- Common Lisp

Education

Whitney Young High School 6 Year Accelerated Program

2015 to present; expected Date of Graduation: June 2021

- Successful completion of accelerated coursework: H. Biology, H. Chemistry, H. Artificial Intelligence, AP US History (5), AP Physics I (4), AP Physics II (5), AP Calculus BC (5), AP CS A (5), AP Language & Composition (5).
- Principal's Scholar (2015 – 2020)
- AP Scholar with Distinction (2020)

Extracurricular Activities

University of Chicago Office of Special Programs (OSP)-College Prep

2018 to present

Includes over 100 contact hours each year in weekly laboratory science classes, bi-annual residential institutes, college and career exploration and planning activities

- Developed and played an active role in team presentations related to astronomy and robotics.
- Exploration of machine learning, deep learning, and game theory and their applications.
- Participated in program focus sessions and provided feedback to OSP staff.
- Volunteered at OSP sponsored events as a student leader.

University of Chicago Center for Data and Computing Research Assistant

Summer 2019

- Conducted undergraduate-level research in conjunction with Ph.D students and post-doctorate scholars from the University of Chicago, Globus Labs, and Argonne National Laboratory.
- Contributed to [XtractHub](#), a distributed computing system that extracts metadata from scientific repositories.
- Collaborated with materials scientists from Argonne to adapt materials science tools for XtractHub and processed materials science data from Argonne National Laboratory.
- Co-authored [Serverless Workflows for Indexing Large Scientific Data](#). Paper accepted to Workshop on Serverless Computing at 2019 ACM International Middleware Conference.
- Featured in [article](#) on the University of Chicago Office of Civic Engagement website.

University of Chicago Globus Labs Research Assistant

Fall 2019-Spring 2020

- Developed experimental materials science file classifier using deep learning with post-doctorate researchers from Argonne National Laboratory.
- Designed and developed Xtract Container Service, a distributed system for managing, building, and storing computing containers. To be used in the future to package big data and machine learning experiments at Argonne.

University of Chicago Center for Data and Computing Research Assistant

Summer 2020

- Conducted undergraduate-level research with University of Chicago Assistant Professor Raul Castro-Fernandez.
- Developed and built d-gen, an open-source tool for generating synthetic relational databases.
- Created a [video](#) detailing d-gen and presented it at symposium alongside undergraduate students.

University of Chicago Globus Labs Research Assistant

Fall 2020-Present

- Conducted undergraduate-level research in conjunction with Ph.D students and post-doctorate scholars from the University of Chicago, Globus Labs, and Argonne National Laboratory.
- Continuing to develop tools to expand XtractHub's ability to process various scientific files.
- Planning to continue development of Xtract Container Service for use at Argonne.
- Planning to co-author publications for conferences and workshops such as the International Symposium on High-Performance Parallel and Distributed Computing.

Running

2016-Present

- Varsity Cross Country and Track & Field.

Music

- Violin (*2008-Present*)
- Chicago Youth Symphony Orchestra (*2017-2019*)
 - Performed annually in free orchestra concerts for CPS students.
- Whitney Young High School Chamber Orchestra (*2016-2020*)
 - First CPS Orchestra to perform at Midwest International Band and Orchestra Clinic.

Community Engagement:

- Office of Special Programs Kovler-Hawkins Career Conference. *Fall 2020*
 - Virtually moderated and led conference panel discussions between professionals and high school students.
 - Led panels in Business, Law & Justice, Communications, Technology, and Science & Research.
 - Featured in [article](#) on the Kovler-Hawkins Career Conference website.
- Volunteer Teaching Assistant for Whitney Young CS Department. *Fall 2019-Spring 2019*
 - Assessed assignment development and evaluated student project/assignment completion.
 - Provided feedback to teacher and student.
- Refurbished used computers to donate to under-resourced families. *Summer 2018*