

# Ryan Anselm

ryan.anselm@columbia.edu ◊ (832)-277-5812 ◊ ryboselm.github.io

## EDUCATION

---

### Columbia University

BS in Computer Science, Minors in Applied Math and Applied Physics

**GPA:** 4.0/4.0

Expected Graduation: May 2024

*New York, NY*

## EXPERIENCE

---

### 3D Brain Tissue Segmentation with U-Net Model

November 2021

- Implemented a CNN with U-Net architecture in Pytorch to perform 3D segmentation of MRI brain scans.

### Grader at Art of Problem Solving

September 2021 - Present

- Provided constructive feedback and helped students comprehend class material in online math & chemistry courses.

### Computational Chemistry Undergraduate Researcher

January 2021 - August 2021

- Worked in the Henkelman Group at UT Austin developing algorithms for finding and characterizing charge density critical points in the *Grid-based Bader Charge Analysis* research project.
- Gained familiarity with Fortran, numerical methods, and scientific programming practices.

### High School Research Assistant at Rice University

June 2019 - August 2019

- Investigated the mantle geochemistry of siderophilic elements partitioned between carbonated and sulfidic magmas under Dr. Rajdeep Dasgupta. Co-author of *a paper* published in *Geochimica et Cosmochimica Acta*.

## ACTIVITIES

---

### Columbia University Science Olympiad

2021 - Present

*Co-Founder & President*

- Selected as an Exam Author/Event Supervisor for the following tournaments: Nationals (2021, 2022), MIT (2021, 2022), UT Austin (2020, 2021), UPenn (2021), Princeton (2020)
- Organized and directed the ATX Game On Tournament, a coding contest introducing the Scratch programming language to 40+ students in grades 6-9.

### Columbia University Robotics Club

2021 - Present

- Developed motion & sensing systems for the Autonomous Vehicles project for the F1Tenth autonomous racing competition.

## HONORS

---

### United States National Chemistry Olympiad High Honors

2019, 2020

- Placed among the top 50 nationwide on the USNCO National Exam out of ~15,000 students.

### USA Physics Olympiad Semifinalist

2020

- Placed among the top 400 nationwide on the USAPhO F=ma exam out of ~3,000 students.

### USA Computing Olympiad Gold Division

2019