Ryan Anselm

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EDUCATION

Columbia University — Expected Graduation: May 2024
BS in Computer Science, Minors in Applied Math and Applied Physics — *New York, NY*
GPA: 4.0/4.0
Selected Coursework: Honors Linear Algebra, Honors Vector Calculus, Honors ODEs, Intro to Probability and Statistics, Advanced Programming, Data Structures, Advanced Classical Mechanics, Modern Physics

EXPERIENCE

Computational Chemistry Undergraduate Researcher — January 2021 - August 2021
- Developed algorithms for finding and characterizing charge density saddle points in the *Grid-based Bader Charge Analysis* research project with the Henkelman Group at The University of Texas at Austin.
- Gained extended experience with Fortran and shell programming, numerical methods, and data science and data visualization techniques.

Summer Intern at Applied Optoelectronics, Inc. — June 2020 - August 2020
- Designed and programmed a 6-axis robot arm system for precisely loading and unloading semiconductor chips from specialized containers.
- Implemented a visual inspection system for quantifying and correcting chip misalignment using LabVIEW.

Student Researcher at Rice University — June 2019 - August 2019
- Investigated Earth's geochemical history through understanding the *partitioning behavior of siderophilic elements* between carbonated and sulfidic magmas in the mantle under the mentorship of Dr. Rajdeep Dasgupta.

ACTIVITIES

Columbia University Science Olympiad — August 2020 - Present
Co-Founder & President
- Selected as an Event Supervisor to write for the following nationally competitive tournaments: Nationals (2021, 2022), MIT (2021, 2022), UT Austin (2020, 2021), UPenn (2021), Princeton (2020)

Columbia University Robotics Club — September 2021 - Present
- Spearheaded the development of motion & sensing systems for a student-built autonomous vehicle project, set to compete in the 2022 F1Tenth autonomous racing competition.

HONORS

USA Physics Olympiad Semifinalist — 2020

National Merit Finalist — 2020

United States National Chemistry Olympiad High Honors — 2019, 2020

USA Computing Olympiad Gold Division — 2019

SKILLS

Programming Languages: Python, Java, C/C++, Fortran, Julia, HTML/CSS, Matlab
Misc. Tools & Libraries: UNIX/Linux, Git, Pytorch, Numpy, Pandas, Matplotlib, LaTeX