

John Ong

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EDUCATION

B.S. in Mathematics with a Statistics Emphasis, Computer Science Minor University of Utah <ul style="list-style-type: none">GPA: 3.922/4.0	<i>Aug 2021 – May 2025</i> Salt Lake City, UT
Diploma of Merit Taylorsville High School <ul style="list-style-type: none">GPA: 4.0/4.0	<i>Aug 2018 – Jun 2021</i> Taylorsville, UT

EXPERIENCE

Station1 Frontiers Fellowship – Undergraduate Research Fellow <ul style="list-style-type: none">Engaged in the philosophy of Socially Directed Science and Technology with over 50 assignments, readings, class experiments, a leadership camp, and a comprehensive professional development curriculum that allowed Fellows to understand the interactions between social sciences and STEM and prepare to solve real-world issues. (130 hours)Worked in conjunction with MDAnalysis and an undergraduate research intern.	<i>Jun 2023 – Aug 2023</i>
MDAnalysis – Research Intern <ul style="list-style-type: none">Conducted research with the guidance of mentors to extend MDAnalysis's interoperability with the PDB and compiled a history of the development of the PDB's supported data formats, including PDBx/mmCIF and legacy PDB files. Applied research skills to find, read, and conduct literary analyses of literature as it pertains to the PDB, molecular dynamics, structural biology, and computational chemistry. (320 hours)	<i>Jun 2023 – Aug 2023</i>
University of Utah Pre-REU – Undergraduate Researcher <ul style="list-style-type: none">Explored the field of dynamical systems and their subsequent relation to intervals between any two numbers over the course of 120 hours of classwork and lectures. Classwork included writing scratchwork and preparing proofs to fundamental theorems within the study of dynamical systems.Completed a capstone project focused on the conversion between dynamical systems and their inverses. (10 hours)	<i>Jun 2022 – Jun 2022</i>

HONORS AND AWARDS

D. Keith Reed Memorial Scholarship <ul style="list-style-type: none">Awarded in memory of Dr. D. Keith Reed who taught and inspired mathematics students at the University of Utah and beyond.	<i>Apr 2024</i>
Michael Zhao Memorial Scholarship <ul style="list-style-type: none">Awarded in memory of Michael Zhao, an outstanding undergraduate at the University of Utah who completed his honors degree in Mathematics in 2017.	<i>Apr 2023</i>

PROJECTS

Interoperability <ul style="list-style-type: none">Investigated the evolution of heterogeneity between objects in the Protein Data Bank (PDB) through literature and interviews that highlight motivations for changes in the PDBx/mmCIF and legacy PDB file formats. (320 hours)	<i>Jun 2023 – Aug 2023</i>
Random Phrase Generator <ul style="list-style-type: none">Pair-programmed a random phrase generator given a Context-Free Grammar(CFG) file which placed 39th out of 200 groups in execution efficiency which demonstrated excellence in application of data structures and algorithms. (30 hours)	<i>Dec 2022</i>
Differentiability of Dynamical Systems <ul style="list-style-type: none">Investigated the impact of differentiation on the dynamical system and its conjugate with two other groupmates. (40 hours)	<i>Jun 2022</i>
Tower Defense Game <ul style="list-style-type: none">Built an RTS-style tower defense game set at the Battle of Jena-Auerstedt, where you play Marshal Davout who oversees a small army corp against the might of the Prussian Army. (60 hours)	<i>Apr 2022</i>

OTHER PROFESSIONAL QUALIFICATIONS

Web Development: HTML, CSS, JavaScript
Programming: Java, MATLAB, R, MIPS, Python
Public Speaking and Presentation
Microsoft Office: Word, PowerPoint, Excel