WILLIAM R. HALBERT
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EDUCATION

UNIVERSITY OF FLORIDA Gainesville, FL
Bachelor of Science with a minor in Computer Science and a major in Chemical Engineering December 2024
GPA: 3.71; Honors; University Research Scholars Program; Bright Futures Scholar; Dean's List Fall 2020, Spring 2021
UNIVERSITY OF NEW SOUTH WALES Sydney, NSW, AUS
Exchange Program January – May 2023

WORK EXPERIENCE

University of Florida – Department of Material Science and Engineering Gainesville, FL
Undergraduate Research Assistant February – August 2022

- Learned how to make mixed metal oxides, which are used in the magnetic strip of credit cards, lithium-ion batteries, hydrogen fuel cells, capacitors, solar panels, and more
- Collaborated on a project for Thermochemical Hydrogen Generation, improving upon a method to generate $2 per liter renewable hydrogen for the Hydrogen Economy using mixed metal oxides as the catalyst
- Aided in the development of a new Bismuth material that could be used for durable computer memory storage and credit card magnetic strips, using High Entropy Oxides, a new category of stable and durable materials
- Published "Complex Oxide Nanoparticle Synthesis: Where to Begin to Do It Right?" in MDPI, creating a guide to sourcing the chemicals to make mixed metal oxides and knowing which metals can be combined into a single material

Mote Marine Laboratory Sarasota, FL
Research Assistant – Department of Phytoplankton Ecology June – August 2018

- Expanded upon my three years as a High School Intern at Mote by researching phytoplankton with Dr. Vincent Lovko and learned how to grow, identify, sample, and count microalgae
- Studied the literature to propose a potential mechanism to kill Red Tide, a neurotoxic phytoplankton that is a large-scale problem in the Gulf of Mexico, using a nontoxic phytoplankton to outcompete it
- Conducted six weeks of trials using four phytoplankton to ideally outcompete Red Tide based on a Georgia Tech study
- Discovered a diatom often used to make biofuels also had the ability to kill Red Tide, taking just 48 to 72 hours

SKILLS & TECHNOLOGIES

Programming Languages: C, Python, Matlab, Javascript, CSS, HTML
Workflows/Tools: React JS, Node JS, MongoDB, Git, VSCode, Postman, PyCharm, Spyder, CLion, Studio 3T
General: Solidworks, Figma, Microsoft Office, Google Cloud Suite, Canva, Slack

TECHNICAL PROJECTS

Tesla Landing Page and Test Drive Page - Scrimba– Javascript, CSS, HTML
Chik-Fil-A Food Ordering Web App – Srimba – Javascript, CSS, HTML
Minesweeper – COP3503 – C, SFML
Razor Scooter Rendering and Animation – EML2023 – Solidworks
2048 Game – COP2271 – Matlab
Gear-Shifting Unit – Gator Motor Sports – Matlab

LEADERSHIP

Delta Upsilon – Florida Chapter
Treasurer January – December 2021

- Elected as Treasurer and entrusted by my peers to have the integrity and intellect to responsibly guide the Chapter's finances, using boot-strapped financial planning to plan the events necessary to grow the small chapter
- Recruited alongside the executive board and chapter to acquire 24 new members throughout my term, creating a culture based on community, shared fun, and enjoying time together
- Developed the $80,000 total budget, consisting of managing acquiring rent payments from brothers, organizing payments to the Alumni Organization, UF Interfraternity Council, Delta Upsilon International organization, utility bill, and various sub-budgets for house improvement, recruitment, social budget, and taxes
- Organized sub-budgets to track executive members who needed to spend funds for general operations, planning ahead for expected number of events and cost of each ahead of the semester and checking in weekly to update them on their budget's current wellbeing