Abigail Adam

(647)-519-6684 | acadam00@gmail.com | LinkedIn | Portfolio

Profile

I am a second year engineering student, studying engineering physics. I'm passionate about physics, math, and learning on my feet. These characteristics drove me to pursue physics outside of school, learn to program in various languages, and to use CAD. I'm also a very collaborative person, and I am at my best when working towards a goal with a team. I'm looking to expand my knowledge and learn more about engineering by gaining diverse experiences in the field, especially in the manifestations of applied physics and mathematics in the engineering industry.

Education

Bachelor of Applied Science, Engineering Physics - University of British Columbia	Expected May 2028
Relevant Coursework: Experimental Techniques, Physics for Engineers I and II, Introduction to Engineering I and II, Computation in Engineering Design, Linear Algebra, Principles of Software Construction, Linear Circuits	GPA: 88% Awards: Dean's List
Design Team: UBC Agrobot	
Summer Program – Harvard University	June – August 2022
Relevant Coursework: The Life and Death of Stars (A), Introduction to Digital Fabrication (A-)	GPA: A

Skills & Abilities

Technical Skills	Engineering Design | Fusion360 | AutoCAD | MATLAB and Simulink | C | C++/Arduino | Java | Breadboarding | Applied Mathematics | LaTeX | TinkerCAD | IntelliJ | Laser Cutting | 3D Printing | Prototyping | Technical Writing

Technical Experience

Summer Research Student | Technion – Israel Institute of Technology, Faculty of Physics | July –August 2024

- Participated in the International Undergraduate Summer Research Program, which provides opportunities for excellent undergraduate students from across the globe to gain experience in groundbreaking research
- Worked with the High Energy Physics Group, supervised by Professor Yotam Soreq
- Learned the fundamentals of particle physics and explored the underlying applied mathematics, gaining a deeper understanding of group theory, tensors, and probabilities
- Gave a successful presentation on a paper titled Mechanical Detection of Nuclear Decays and its potential applications to the group's research, which involved determining how the device functioned mechanically and

electrically, as well as how the authors collected and analyzed their data, resulting in a determination that the technology was not compatible

Team Member | Solar Powered Phone Charger | Grade 12 Capstone Project | 2023

- Was a member of a three-person team that designed, fabricated, and tested a solar powered phone charger compatible with iPhones and Android devices for the capstone project of my high school's grade 12 Engineering course
- Managed the project using Gantt charts, successfully distributing work and accomplishing all tasks on time and to a high standard of quality
- Had primary responsibility for the mechanical design of the folding case, including the construction of physical prototypes, modelling in TinkerCAD, 3D printing, and assembling the case.
- Assisted in the Arduino programming used to monitor the panel performance, as well as the soldering and electrical design that connected the solar panels to one another and the device being charged, as well as research on required voltages to ensure the design was safe to use.

Exoplanet Characterization | The Life and Death of Stars Cumulative | 2022

- Characterized a distant binary stellar system (ID 253990973) using data from the Transiting Exoplanet Survey Satellite (TESS) using EXOFAST v2 (a software developed by my professor), which modelled the system
- Analyzed the model, showing that the stellar system houses a tidally locked exoplanet using several graphs vital to stellar astronomy, such as transit, MIST (MESA Isochrones & Stellar Tracks) mcmc, and chain graphs.
- Wrote a technical paper about my findings and process using LaTeX, which included calculations that provided further details about the system, such as relative brightness of the two stars
- Delivered a presentation to my class which detailed my findings, allowing me to demonstrate my skills at oral presentations and communication of complex topics, achieving an A+ on the project overall

Other Experiences

Graphic Designer| UBC Orbit | September 2023 – August 2024

- Designed and wrote the sponsorship package to be distributed to current and potential sponsors to encourage investment in the team
- Assisted in developing overall engagement strategies, including designing and writing materials for distribution on social media that communicated the team's mission and maintained a good relationship with the public
- Used organizational and leadership skills while working collaboratively to ensure all deliverables were delivered on time and beyond the standards prescribed

Swim Instructor/Lifeguard| Prosserman Jewish Community Center | April 2022 – July 2022

- Planned lessons for swimmers of all ages and abilities, and adjusted teaching to each student's needs and learning style, resulting in overwhelming patron satisfaction
- Supervised swimmers and enforced the rules of the pool, keeping all patrons safe and leading safety drills to maintain the readiness of the lifeguard team
- Dealt with patron issues, utilizing customer service skills to ensure all rules were followed while also ensuring all patrons could enjoy themselves