Alexander Wyrstiuk

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EDUCATION

McGill University – Faculty of Engineering, Montreal, Canada   2021 – Present
Bachelor of Engineering, Major in Electrical Engineering, Minor in Mathematics, Minor in Computer Science   CGPA: 3.68/4.00
Awards: 2023-2024 Academic Year

- Dean's Honour List – awarded for being among the top 10% of the faculty
- Motorola Foundation Scholarship in ECE – awarded for high academic standing, interest in wireless comms, leadership & teamwork qualities
- Faculty of Engineering Scholarship – awarded for high academic standing

EXPERIENCE

Undergraduate Research Assistant - iSMART Lab, Montreal, Canada   June 2024 - Present

- Contributing to a research project in using ML for healthcare. Associated with McGill University and the MILA-Quebec AI Institute
- Developing an experiment aimed for 100 participants; recorded 30+ hours of data from experiment testing and troubleshooting
- Proficiency in Biopac's AcqKnowledge 5.0 software and in operating a variety of Biopac devices: NIBP100D, MP160, AMI100D, ...

Undergraduate Teaching Assistant – McGill University, Montreal, Canada   May 2024

- Voluntary teaching assistant for an introductory linear algebra course with over one hundred students enrolled
- Held office hours twice a week from 1 pm - 4 pm, enriched students' understanding as opposed to giving them details to memorize
- Joined the course instructor in hosting extra help sessions before all midterm and final exams, lasting 4 hours minimum

McGill Rocket Team, Montreal, Canada   September 2021 – January 2022

- Learned the basics of rocket science and propulsion across hours of peer-developed courseware
- Attended weekly team meetings and discussions, and studied assigned weekly readings in rocket science material
- Participated in a rocket propulsion test requiring use of high pressure nitrous oxide; pressures of around 700 psi

Projects

My Portfolio Website   June - July 2024

- First project in front-end design; self-taught and extensively used HTML, CSS and Javascript
- Four main webpages at the core of the website, each with a distinct purpose: 'Home', 'About', 'Experience', 'Projects'
- Project portfolio divided into multiple categories, facilitating expansions and making it easily navigable

Workout Log Program   April - May 2024

- Interactive program written in C that allows you to create, store and edit notes about your workouts
- The program has a command-line user-interface theme, interacts with the computer file system and avoids sophisticated libraries
- There are 6 commands: 'add', 'remove', 'update', 'list', 'save' and 'exit'. Each are very robust in face of user input

Floating-point Adder   March - April 2024

- Digital design in VHDL that performs addition with 8-bit minifloats. Combinational and implemented structurally
- Immediately identifies edge cases and doesn't use process blocks, avoiding unnecessary computation and inherent memory usage
- Three main sub-components: 'preparator', 'adder1', 'normalizer'. See the README.md file on my GitHub repo for more details

Research Paper for Coursework at McGill: Radiation Shielding Materials for Moon Missions   October - December 2023

- Compared aluminum, liquid hydrogen and polyethylene for radiation shielding during 30-day moon mission at solar maximum
- Studied the radiation environment of the solar system, the solar cycle and radiation dosimetry. The paper received an A grade
- The solutions, criteria, and final recommendations were chosen based on factors supported by academic literature

SKILLS AND INTERESTS

Coding Languages: C, Java, Python, VHDL, HTML, CSS, Javascript, Bash. Experience with MATLAB
Language Skills: Fluent English, Advanced French
Interests: Fitness and Strength Training, Professional Armwrestling, Sci-Fi, Physics, Mathematics and Engineering (Differential Equations, Signal Processing, Control Systems, Electromagnetics, Wireless Comms, AI and Machine Learning, …)

Links

My Portfolio Website: *https://davwyr.com/portfolio* **GitHub:** https://github.com/awyrst   **iSMART Lab:** https://ismart.ece.mcgill.ca/
LinkedIn: https://www.linkedin.com/in/alexander-wyrstiuk-5b5256214