TAYLOR ZOWTUK

3613 35 Avenue NW · Edmonton, AB T6L 4Z5 · 780-868-0945
zowtuk@ualberta.ca
Personal Website · **GitHub** · **LinkedIn**

EDUCATION

SEPTEMBER 2018 – CURRENT (APRIL 2021 GRADUATION)

BSc Computing Science Specialization in Software Practice, UNIVERSITY OF ALBERTA

- Relevant coursework: Practical Programming Methodology, Computer Organization and Architecture, Algorithms, Foundations of Computation, File and Database Management, Information Systems Security Management
- Dean's Honor Roll, 2018/19
- Jason Lang Scholarship, 2018/19
- GPA to date of 3.9/4.0

SEPTEMBER 2013 – APRIL 2018 (COMPLETED)

BSc General Biological Sciences Major, UNIVERSITY OF ALBERTA

- Dean's Honor Roll, 2015/16; 2017/18
- Jason Lang Scholarship, 2015/16; 2017/18
- University of Alberta Academic Excellence Scholarship, 2013
- Alexander Rutherford Scholarship, 2013
- Developed strong organizational skills and work habits to improve GPA year over year; final year GPA of 3.8/4.0

EXTRACURRICULAR EXPERIENCE

DECEMBER 2018 - CURRENT

Controls Team Lead, UNIV. OF ALBERTA BIOMEDICAL TECHNOLOGIES DEVELOPMENT GROUP

- Building an embedded control system for an exoskeleton to reduce the risk of high-load and repetitive strain injuries in the workplace
- Researched, designed, and implemented early hardware prototypes including requirements gathering and circuit planning (Arduino, ODrive, FSR, & IMU)
- Established the software development stack (C++ & make), created extensive documentation, developed motor calibration functions, and developed PID control
- Scheduled weekly tasks for, and mentored, an interfaculty team of 5
- Coordinated with controls and biomechanical team leads to plan future work, ensure progress is continuing to schedule, and maintain the vision of the project

JANUARY 2019

Level Up Hackathon, UNIVERSITY OF ALBERTA

- Deployed a full stack interactive map web application; learned about and applied in a restricted time frame: hosting on a Cybera Cloud platform operating on Linux running an Apache server using Python/Django REST framework, and an SQLite database as backend, with JavaScript and React for front end interface

WORK EXPERIENCE

MAY – AUGUST 2019

Research Assistant, UNIVERSITY OF ALBERTA

- Harnessed strong computer science fundamental to implement Unicode UTF-8 support for an open source RISC-V simulator while working with an unfamiliar language (Java)
- Converted a MIPS assembly graphics library to RISC-V assembly and expanded it with more: primitives, tests, and detailed documentation
- Collaborated with a PhD student to evaluate methods of implementing a softcore on a Xilinx FPGA capable of booting Linux and developed several designs in Vivado
- Debugged large existing software (numerous files & tens of thousands of lines of code) and implemented fixes
- Reviewed peers code and offered bugfixes and suggestions for improving algorithm design, coding practices, and documenting
- Summarized and presented current research in literature reviews with graduate and undergraduate peers

MAY – AUGUST 2014 – 2018

Cylinder Handler, PRAXAIR INC.

- Spearheaded the teams of summer students by familiarizing new team members with company practices and policies and efficiently allocated tasks to meet daily objectives
- Always adhered to and promoted strict standard operating procedures and good manufacturing practices to maintain compliance with HPFBI medical facility regulations
- Reorganized and deployed new storage and workflow systems that allowed shift work to be completed on average 2 hours earlier a day and increased production (decline in monthly product shortages)
- Coordinated with multiple teams (shipping, production, lab, QA, and management) to complete various projects in a manner consistent with business objectives

VOLUNTEER EXPERIENCE

JANUARY – APRIL 2018

Student Accessibility Services Note Taker, UNIVERSITY OF ALBERTA

- Took clear and organized lecture notes for students who have disabilities or medical conditions that interfere with their ability to take their own notes
- Never missed taking notes for a lecture over the course of the entire semester and always made notes available on time

SKILLS

TECHNICAL

- Proficient: Python, C & C++, MIPS & RISC-V assembly, Git & GitHub, Windows & Linux
- Familiar: SQL, Java, Django, JavaScript, HTML, React, make, Vivado

HARD SKILLS

- Well developed: Debugging, Code Reusability, Documenting, Commenting Code

SOFT SKILLS

- Well developed: Leadership, Teamwork, Communication, Time Management, Organization

Use the link to my personal webpage / github for access to my public portfolio. Access to private portfolio available on request.