

# Zachariah Blair

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## SOFTWARE AND MECHATRONICS ENGINEERING STUDENT

I am a Software Engineering student currently studying at the University of Calgary. I have a mind for problem solving and a love for invention. As a passionate learner I always strive for understanding rather than just completion, and I believe that quality is the best measure of success in all aspects of life.

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## SKILLS AND PROFICIENCIES

C/C++	HTML/CSS	Arduino	Leadership	Problem Solving
Python	JavaScript	RISC-V	Teamwork	Critical Thinking
Java	React	Embedded Systems	Communication	Attention to detail

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## PROJECTS

### Custom Shell (built in C)

Worked with a team to build a custom command line shell. We implemented support for command line parameters, the PATH environment variable, command piping and background process execution.

### Custom Memory Allocator (C)

Working with the same team, we created a virtual memory allocator that mimicked the functionality of the “malloc()” function as well as provided support for memory freeing and destroying.

### Volunteer Scheduling System (Java)

With another team, I lead the production of an application that models the objects, relationships and functionalities of a volunteer organization, and uses algorithmic sorting to create a time efficient schedule.

### Notes Web App (React, AWS)

Another student and I created a web application with a highly functional user interface that connects to AWS to store user data, and implements the Google login API to handle privacy. I was mainly involved in frontend.

### Sudoku Solver (Java)

I worked on a personal project to create a command-line application that algorithmically solves sudokus.

### Various Small Arduino Projects

In my free time, as well as for class projects, I have worked with the Arduino Uno board on many basic applications such as motor and servo control, external chip integration, and ultrasonic distance measurement.

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## PROFESSIONAL EXPERIENCE

### St. Peter's Roman Catholic Church

August 2017 - Present

#### Audio / Visual Technician and Team Lead

Work with live audio mixing systems and video presentation software to live stream services and events such as weddings and funerals. As a head technician, I lead and supervise a group of other employees and volunteers, as well as mentor new team members.

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## EDUCATION

### Bachelor of Science in Software Engineering yr. 3

Minor: Mechatronics

University of Calgary

Dean's List Student | 3.95 GPA last semester

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## LEADERSHIP EXPERIENCE

- Team Lead as A/V Technician
- Scheduling System Project Leader
- Local Young Men's Community Leader
- Summer Camp Counsellor (Awarded for Excellent Leadership)