

# ISAIAH KING

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## TECHNICAL SKILLS

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- **Programming** C/C++, Python, C++, MATLAB, HTML/CSS
- **Software/Tools:** SolidWorks, AutoCAD, Revit, Altium, Microsoft Office Tools
- **Hardware/Lab equipment:** Oscilloscopes, Function Generators, Soldering
- **Knowledgeable:** Civil3D, KiCad, Eagle PCB design

## PERSONAL PROJECTS

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### Solo Project - Custom snare drum throwoff and butt plate July 2025 - Present

- Created custom mechanical design for snare drum throwoff and butt plate using SolidWorks
- Created a 5 stage tightening system for snare side butt plate

### Solo Project - Custom Smartwatch July 2025 - Present

- Developing a OLED display smartwatch utilizing an ATmega328P chip.
- Implementing custom display, time tracking, power regulation and more utilizing DS3231M, MCP73832 and XC6206 chips.
- Modeled and designed watch face and strap attachment

### Group Project - Rodent Repellant Jan 2025 - Present

- Designing a rodent repellent device using Raspberry Pi 5 to protect farm crops by detecting and deterring pests in real time
- Implementing YOLOv8 image processing to accurately detect rodents and trigger automated repelling mechanisms
- Modeling containment utilizing SolidWorks

### Team Project - Stepper Motor Organ Sept 2024 - Jan 2025

- Continuously enhancing an ongoing team project by optimizing JavaScript code for efficiency and refining the design layout for improved user experience
- Introduced organizational changes to ease code readability and flow, error-checking features to ease user experience and altered key features to improve circuit function and musical output

## CURRICULAR PROJECTS

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### Solo Project - RISC-V Processor Pipeline Simulator July 2025

#### ENSC 254 - Computer Organization - SFU

- Designed and developed a C++ cycle accurate simulator for a single issue five-stage RISC-V pipeline
- Implemented load-use hazard detection in the ID stage with one-cycle stalls and bubble insertion

### Team Project - Fall Detection Device Sept 2023

#### ENSC 100w - Engineering, Science and Society - SFU

- Programmed a C++-based alerting device utilizing Arduino Nano to notify healthcare workers of patient falls, enhancing response time and patient safety.
- Designed and 3D-printed a protective shell for the device using SolidWorks and Blender, ensuring durability and ergonomic fit for patients.

# Isaiah King

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## WORK EXPERIENCE

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### Lifeguard

May 2020 - Aug 2022

#### MGM Resorts International - Las Vegas NV

- Applied strong water safety knowledge while ensuring guest well-being
- Collaborated effectively with team members in a fast-paced environment, enhancing teamwork and adaptability
- Engaged with guests daily, developing strong communication, customer service, and conflict resolution skills.

### Lifeguard

Mar 2022 - Sept 2023

#### The Mirage - MGM | Hard Rock Resorts International - Las Vegas, NV

- Partnered with pool management to streamline operations during the hotel's transition from MGM Resorts International to Hard Rock, demonstrating adaptability, problem-solving, and organizational skills.
- Coordinated teams in handling high-pressure medical emergencies, strengthening crisis management, and teamwork under stress.

## VOLUNTEER EXPERIENCE

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### Lead Volunteer:

Oct 2021 - Dec 2022

#### Opportunity Village - Las Vegas, NV

- Volunteered at Opportunity Village during various events, assisting with community engagement and support activities
- Provided care and companionship to children and elderly individuals while collaborating with teams to ensure a safe and inclusive environment

## EDUCATION

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### Simon Fraser University

Sept 2023 - Present

#### Bsc. Systems Engineering

- Pursuing a Minor in Business

Sept 2019 - May 2023

### West Career and Technical Academy

#### Specialization in Engineering

- Relevant coursework in Engineering Design and Project Management

## EXTRACURRICULAR ACTIVITIES

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### Varsity Wrestling

- Wrestled at 125 and 133 lbs for two semesters at Simon Fraser University
- Competed in numerous high-level tournaments during high school, earning multiple first-place and finalist finishes

### Music

- Founded and led high school jazz band for multiple years; continued jazz experience and joined the SFU Jazz ensemble
- Earned Best Drummer in Battle of The Bands: Henderson competition for Metal Drumming in 2023
- Earned best soloist at the Reno Jazz Fest in 2017, 2018 and 2019

### Ansible Open Source Contributor

- Joined the Ansible OS forum to self-teach Ansible applications and system automation implementation.
- Frequently contributing to discussion boards to ask and answer questions
- Assisting in programming and documentation improvements