Bea MacDonald

Computer Science (Bachelor of Science)
Expected Graduation 2026
Simon Fraser University, Canada

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Links

- github.com/Q-Bea
- linkedin.com/in/bea-macdonald

Skills

OS
Windows, GNU/Linux

LANGUAGES

Typescript	● ● ● ● ○
Python	● ● ● ○ ○
C++	● ● ○ ○ ○
Java	● ● ○ ○ ○

FRAMEWORKS
Node.js, Express
Arduino, Vue.js, Nuxt
Socket.io, Maven, Gradle

TOOLS
MongoDB, Azure, Github Actions
SQL, VS Code, Vim, Git, Qt

Coursework

- Calculus I & II
- Mathematical Logic and Foundations
- Introduction to Computer Architecture and Assembly
- Introduction to Run-time analysis and optimization
- Introduction to Operating Systems

Education

2023-2026
SIMON FRASER UNIVERSITY
Bsc in Computer Science

2021-2023
UNIVERSITY OF VICTORIA
Bsc in Computer Science
Average: 90%

Interests

Rock Climbing, Technical Theatre, Robotics

Side Projects

CI Workflow for Jekyll Static Website Previews　　**Jekyll, Node.js, Azure**
- Assists contributors developing static site content by deploying changes in a pull request to a preview site.
- Utilizes a web-server running in Azure which receives data from GitHub Webhooks.

Speed Climbing Training Tool　　**Python, Qt**
- Automatically records, tracks and times climbers during a training session using system clock and http requests to a GoPro.

sACN (Web Protocol) Implementation for Arduino　　**Arduino, C++, C**
- Translates multicasted sACN web requests into configurations usable by various lighting appliances connected to an Arduino microcontroller.
- Provides a http user portal, support for automatic VLAN detection and entering a pairing mode.

Experience

2022　**Calgary Fringe Festival**　　**Technology Assets and Programming**
- Wrote custom software to manage and create assets for a projected display behind actors on stage.
- Controlled via internet, the system could of utilize multiple projectors and state controllers to enable seamless control of visuals by all stakeholders.

2021　**Network Alliance**　　**Small Business IT Consultant / Support**
- Designed and implemented a new CCTV management solution which increased floor coverage and halved disk-usage.

2018-2021　**Calgary Climbing Centre**　　**Competitive Rock Climbing Coach**
- Coached provincial and national level athletes including designing training regimes, assessing progress, and providing competition support.
- Created an automated system to generate personalized progress reports and training plans for each athlete.

Achievements/Awards

2021　**UVic Entry Scholarship for Academic Achievement**
- Awarded for maintaining an overall academic average above 85%.

2019　**International (Pan-American) Speed Climbing Athlete**
- Qualified for the Youth Pan-American games as part of the Canadian team for Speed Climbing (Rock Climbing), by placing 3rd at Canadian Nationals.

2013-2019　**National Level Rock Climber**
- Competed at Canadian Rock Climbing Nationals each year, medalling in 2013 (Regionals, Gold), 2016 (Nationals, Silver) and 2019 (Nationals, Bronze).