



Benjamin MacDonald

Computer Science (Bachelor of Science)
Expected Graduation 2025
University of Victoria, Canada




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Links

 github.com/Quantum158
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Skills

OS
Windows, GNU/Linux

LANGUAGES
Typescript 
Python 
C++ 
Java 

FRAMEWORKS
Node.js, Express
Arduino, Vue.js, Angular
socket.io, Maven, Gradle

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

Coursework

- Fundamentals of Programming
- Logic and Foundations
- MIT OpenCourseWare - Introduction to Algorithms (Self Study)

Education

2021-2025
B.SCIENCE IN CS
University of Victoria

2018-2021
HIGH SCHOOL
Dr. E.P. Scarlett
Percentage: 88%

Interests

Rock Climbing, Technical Theatre,
Discord Bots

Side Projects

CI Workflow for Jekyll Static Website Previews Node.js, Azure

- A CI tool allowing contributors to preview their pull request before it is deployed to the master branch of a static 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.

E1.31 (Web Protocol) Implementation for Arduino Arduino, C++, C

- Listens for E1.31 web requests, and translates it to LED strip lighting configurations.
- Provides a http user portal, support for automatic VLAN detection and entering a pairing mode.

Experience

2021 **Network Alliance** Small Business IT Consultant / Support

- Designed and implemented a new CCTV management solution which increased floor coverage and halved disk-usage.

2020 **Calgary Fringe** Broadcasting and Technology Support

- Acted as a liaison between various stakeholders ensure high quality performances were successfully broadcast.
- Wrote custom software to support operations and automate administrative tasks.

2018-2021 **Calgary Climbing Centre** Competitive Rock Climbing Coach

- Coached provincial and national level athletes including designing training regimes, assessing progress, and provided competition support.
- Created an automated system to generate personalized progress reports and training plans for each athlete.

Achievements/Awards

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).

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.

2021 **UVic Entry Scholarship for Academic Achievement**

- Awarded for maintaining an overall academic average above 85%.