Axel Jacobsen

github.com/Axel-Jacobsen | linkedin/in/Axel-Jacobsen
axelnjacoben@gmail.com | 778.789.4810

EXPERIENCE

DATA SCIENCE CO-OP | Control   January 2018 – April 2018
- Optimized SQL queries to increase execution speed by 283%
- Wrote and Re-factored Javascript for the website's API for concice and correct code

JUNIOR SOFTWARE DEVELOPER | ubyssey.ca   May 2017 – August 2017
- Worked on Dispatch (Django / React backend platform of ubyssey.ca)
- Created components that allows website content to be modified by non-technical employees

PROJECTS

ROBOT COMPETITION | Engineering Physics   May 2018 – August 2018
- Designed and built a robot to autonomously navigate and retrieve yarn Ewoks
- We located the Ewoks by running the YoloV2 neural network on a Raspberry Pi
- Developed custom IR distance sensor, servo control circuits, and IR signal circuit
- Wrote software to quickly and accurately detect 1 kHz and 10 kHz signals
- See axel-jacobsen.github.io/ENPHRobot/

GENETIC PRISONERS DILEMMA | Personal Project   Aug 2018 – September 2018
- Implemented a Genetic Algorithm in Java to play iterated Prisoner's Dilemma Games
- By giving strategies different amounts of information about the
  moves of their opponents, they evolved to the known optimum strategy
- For example, if a strategy has information about the previous move of it's opponent,
  it evolves to the optimum strategy of "Tit for Tat"
- See github.com/Axel-Jacobsen/GeneticPrisonersDilemma

VOLUNTEER EXPERIENCE

ENGINEERING PHYSICS MENTOR | UBC   September 2018 – Present
- Mentor of five 2nd year Engineering Physics Students

SQUADRON COMMANDER | 103 Thunderbird Squadron   April 2015 – July 2016
- Led the Command Team, a group responsible for 20 senior and 60
  junior cadets in the Squadron
- Mentored senior cadets in leadership and organizational skills

ABOUT ME

PROGRAMMING LANGUAGES
Python • Java • C
JavaScript • HTML • CSS/SCSS
MySQL • LaTeX

SUMMARY
I am an enthusiastic engineering student, with passion in mathematics, programming, and physics. I spend my free time working on my personal projects, climbing, biking, or skiing.