

Axel Jacobsen

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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 concise 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.