
Ian Laffey

Software Engineer

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SKILLS

Concurrent Programming, Compiler Design, Game Development, Relational Databases, Algorithm Design, Model Driven Engineering, Code Generation, Object Oriented Programming, Functional Programming, Event Driven Programming, REST, CRUD
Java, C, Python, MIPS, OCaml, Bash, SQL, PostgreSQL, MatLab, Kubernetes, Docker, Conan, Git, Jenkins, Groovy, Maven, JavaScript

EXPERIENCE

Opal-RT Technologies - Software Intern - Continuous Integration Team

Python, Git, Java, Conan, MatLab, RT-Lab, Jenkins, Groovy, Agile

January 2022 - May 2022

- Refactored CI Pipeline for ePHASORSIM product:
Reduced time-to-fail by 500% (1.25 hours > .25 hours) in failing cases using Core tests.
Decoupled test execution yielding individual test results 900% faster (1.25 hours > 8 minutes).
Parallel test execution allows for speedup of $N+S > N/x + S$ N =Execution time, x = Parallel nodes, S = Setup time.
- Freed up technical debt by creating a custom Jenkins plugin to avoid cross team CI race condition.
- Reduced the RT-Lab Test backlog by designing and managing Python CI and unit tests.
- Helped to train new hires in an international, multilingual team- freeing up the time of my colleagues.
- Made sure to stay busy when blocked on tasks by creating tests where they were lacking.

McGill Robotics, Montreal, QC - AUV Software

September 2019 - April 2020

- Worked in the software division of McGill's Autonomous Underwater Vehicle (AUV) using the Robotics Operating System (ROS), writing code in Python, C++, and scripting in Bash focused on computer vision.
- Collaborated with Undergraduate, Masters, and PhD students to integrate software with the electrical and mechanical components of the AUV, gaining skills in working with version control and a large legacy codebase.

BECS Technology, St. Louis, MO - Engineering Intern

April 2018 - May 2018

- Developed hard skills such as circuit soldering and logic board assembly while shadowing production teams.
- Absorbed strategic knowledge while shadowing engineering teams, observing tool selection and planning prior to production of microcontrollers.
- Performed network diagnostics, general maintenance, and bug repair with software and IT teams.

PROJECTS

Hulse - Project with Colleague at McGill

2021-2022

Leverage your team's untapped computing power to deploy open-source NLP models.

safe-downstream-launcher - Jenkins Plugin

2022

Custom Java plugin written while working on CI pipelines with Jenkins allowing for downstream plugins to be safely launched, avoiding race conditions in a CPS (Pipeline Script) context.

COMP 520 - Compiler Design

Spring 2021

Created a C Compiler from scratch. This included lexer, parser, AST generator, semantic analyzer, and regalloc

EDUCATION

McGill University, Montreal

Bachelors of Science

Software Engineering, Economics

September 2018 - May 2022

CUM GPA: 3.36