

# Lucas Nogueira



Links | Inogueir.me | Inogueir@uwaterloo.ca | +1 226 978-5884

**Languages** | Go, Java, C++, Python, C, JavaScript, TypeScript, HTML, CSS

**Tech** | Docker, Git, gRPC, Spring Boot, MySQL, AWS, React, WebRTC, MongoDB, Redis, Nginx, Jenkins

## Education

**University of Waterloo | Bachelor of Computer Engineering**

Sep 2018 - Apr 2023

Relevant courses: Data Structures & Algorithms, Computer Networks, Compilers, Database Systems

## Experience

**Google | Software Developer Intern | [Pull Requests](#)**

Waterloo, Canada | May 2022 - Aug 2022

- Contributed to the Java and Go SDKs of Apache Beam by creating and maintaining APIs that can interact with Google Cloud Healthcare Stores, enabling developers across the world to write data pipelines for healthcare systems using Beam with Google Dataflow.

**Coursera | Software Engineer Intern**

Canada (Remote) | Jan 2022 - April 2022

- Wrote and maintained scalable Spring Boot gRPC services to efficiently load and store course content such as videos, readings, and quizzes, impacting ~80 million registered users.
- Developed multiple XML-based parsers in Java to process other EdTechs course export files and enable them to be imported into Coursera, increasing instructors authoring speed by more than 10x.

**Ross Video | Software Developer Intern**

Canada (Remote) | Jan 2021 - Aug 2021

- Designed and implemented standardized inter-process communication mechanism to enable signaling among dockerized multimedia streaming microservices. Made it available to other developers through C++ SDK.
- Engineered multi-threaded media pipelines using C libraries to interact with GPU and perform hardware accelerated H264 video encoding/decoding, resulting in CPU usage drop by over 35%.

**The Weather Network | Software Developer in Test**

Canada (Remote) | May 2020 - Aug 2020

- Built, dockerized and shipped Go microservices to concurrently parse weather files, and feed company's forecast engine through AWS SQS, serving +4 million unique users.
- Used Jenkins, Helm, and Kubernetes to standardize CI/CD deployment pipelines across multiple engineering teams, improving infrastructure maintainability.

**AGF Management | Junior Web Developer**

Toronto, Canada | Sep 2019 - Dec 2019

- Implemented React into Java Spring to migrate off legacy JSPs and jQuery Plugins which simplified interaction with backend endpoints and SQL database, also, reduced bundle size by approximately 15%.

**University Of Waterloo | Teaching Assistant**

Waterloo, Canada | Jan 2019 - Apr 2019

- Taught and coordinated CS138, a first-year Software Engineering course introducing students to Data Structures and Object Oriented Programming in C++.

## Projects

**Liteboard.io | [Featured](#) | +300 stars on [Github](#)**

**Tech Stack:** WebRTC, Redis, Node, Express, Nginx

- Built backend infrastructure capable of supporting multistream conferences with up to 50 participants.
- Implemented WebSocket-based chat rooms using Socket.io enabling exchange of messages and files between users.

**Arithmetic Expression Tree Simulator | [Demo here](#)**

**Tech Stack:** JavaScript, HTML, CSS

- A web app that recursively draws the tree structure representation of an arithmetic expression.
- Applied Dijkstra's Shunting-yard and Knuth's layout algorithm to parse arithmetic expression and to ensure branches will never collide, respectively.