Lucas Nogueira

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

Tech | Docker, Git, Spring Boot, gRPC, 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, Database Systems, Computer Networks, Compilers

Experience

Software Developer Intern | Google   Waterloo, Canada | May 2022 - Present
- Contributing to the Go SDK of the Google Cloud Healthcare connectors in the Apache Beam open-source project to enable developers across the world to write ETL pipelines for healthcare systems in Go.

Software Engineer Intern | Coursera   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.

Software Developer Intern | Ross Video   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%.

Software Developer in Test | The Weather Network   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.

Junior Web Developer | AGF Management   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%.

Teaching Assistant | University Of Waterloo   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.