

# Daniel Prilik

Software Developer

## CONTACT

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## SKILLS

### LANGUAGES & FRAMEWORKS

C++  
C  
Rust  
SDL2  
node.js  
HTML5 + CSS  
JavaScript (ES6)  
Typescript  
React & React Native  
Objective-C

### TOOLS

Unix  
CMake  
Git  
Sublime Text  
Travis & Appveyor CI  
Visual Studio  
Perforce  
Unreal Engine 4  
Wwise

## EDUCATION

University of Waterloo  
BSE Software Engineering 2020

## INTERESTS

Exploring Music  
*Fan of Modern Rock, Psych Rock, Synthwave, and Funk (to name a few)*

TV & Movies  
*Mostly sci-fi, both classic and modern*

Emulation  
*I keep up with the scene, and writing my own!*

PC Gaming & VR  
*PUBG, Rocket League, and Fallout are awesome. I also have a Oculus Rift, which is amazing!*

Memes  
*I'm a millennial ~\(\_ツ)\_/*

## EMPLOYMENT

### Apple Inc.

Platform Architecture Engineer - C, C++, Objective-C, Python

Cupertino, CA  
Summer 2018

- Replaced hundreds of large, autogenerated modules with a single small configurable module
- Collected statistics, Modeled best/worst-case scenarios, and Proposed possible implementations
- Deleted >100,000 LOC from project, reducing compile-time by 30%, and improving maintainability
- Analyzed final implementation, confirming that performance met / exceeded initial estimates
- Coordinated across teams to develop a long-term support plan for the feature

### Microsoft - The Coalition

Audio Engineer on *Gears 5 - C++, Unreal Engine 4, Wwise*

Vancouver, BC  
Winter 2017

- Orchestrated a large audio data migration, greatly improving project maintainability
- Identified and intelligently grouped similar assets, reducing asset duplication by a factor of 11x
- Exposed advanced Wwise functionality in the UE4 editor by implementing custom UI components, substantially improving audio artist workflow

### LCBO|next

Full Stack Web Developer - *React, React Native, node.js, Mapbox, Sass*

Kitchener, ON  
Summer 2017

- Spearheaded the Design and Development of a complex React SPA
- Architected several RESTful APIs, and assisted in the development of the node.js backend
- Communicated sales-data in React and React-Native apps using popular dataviz libraries and custom SVG

### Polar.me

Front End Web Developer - *HTML5, Sass, JS, node.js*

Toronto, ON  
Summer 2016

- Designed and Implemented effective Native Advertisements for clients such as Engadget, Wired, and AOL
- Engineered and Deployed a build system to streamline and automate Native Ad development, greatly improving developer efficiency

## PROJECTS

### ANESE + wideNES - [prilik.com/ANESE](http://prilik.com/ANESE)

- Created a cross-platform Nintendo Entertainment System (NES) emulator in C++11 with SDL2
- Compiles on Windows, macOS, and Linux, with nightly builds available from Travis CI and Appveyor
- Designed *wideNES*, a novel technique to automatically map-out worlds and levels in NES games
- Compatible with many popular NES titles, such as *Super Mario Bros.*, *Legend of Zelda*, *Metroid*, and more

### mips241 - [prilik.com/mips241](http://prilik.com/mips241)

- Architected and Implemented an emulator for the MIPS system used in CS 241 at Waterloo
- Features a interactive debugger with step-by-step execution, breakpoints, and instruction disassembly
- Explored compiling C++ to JS using *emscripten* to create a Web interface for the emulator

### 1212! - *1212.rocks*

- Designed and Developed a novel puzzle game for desktop and mobile
- Leveraged JavaScript, HTML5, and CSS to craft a responsive, intuitive, and user friendly web-game
- Gained a strong understanding of responsive design principles
- Acquired a playerbase of over 7000 people each month

### nfinite.space - [devpost.com/software/nfinite-space](http://devpost.com/software/nfinite-space)

- Imagined a cloud file-storage service that could store files without the need for a data-center
- Implemented a protocol to leverage space from connected users to store parts of other users' files
- Developed a proof-of-concept at Hack the North 2016 with a Golang backend, and a React frontend
- Winner of the AWS Sponsor Prize

## AWARDS

### Winner of the Amazon Web Services (AWS) Sponsor Prize

Hack the North 2016, QHacks 2017

For work on *nfinite.space* and *fastify* [[github.com/Melinysh/fastify](https://github.com/Melinysh/fastify)] respectively