

# Jonathan Chung



github.com/chjon



jonathanchung.xyz



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## Summary

- Experience in Java, C++, and asynchronous JavaScript
- Highly self motivated
- Passion for elegant software

## Languages

- Java
- C++
- JavaScript
- HTML
- CSS
- VBA

## Tools

- Git
- DynamoDB
- Node
- Docker
- Jenkins
- Linux
- Gradle
- IntelliJ

## Frameworks

- LibGDX
- Chai
- JUnit 5
- Sinon.JS
- Mocha

## Education

### University of Waterloo

Candidate for BASc,  
Computer Engineering

Cumulative Average: 90.3%

## Awards

- Dean's Honours List (3 terms)
- Queen's Venturer Award
- Excellence in Physics

## Interests

- Recreational mathematics
- Minecraft
- Rubik's cubes

## Experience

### Game Programmer

Montreal, QC

*Behaviour Interactive*

Jan – Apr 2019

- Developed backend features and API endpoints in a microservice architecture for a game with over 5 million downloads using ECMAScript 6 with Node.js
- Designed and built a rich presence system for broadcasting and logging player activity using HTTP, WebSocket, Redis, and the AWS DynamoDB infrastructure
- Implemented a system for purchasing game items using Nintendo's REST API

### Software Developer

Toronto, ON

*Universe Projects Inc.*

May – Aug 2018

- Restructured and generified resource collection infrastructure for data-driven content generation with simple and efficient permission checking using Java
- Developed a system for synchronizing game objectives between the client and server while reducing the number of calls to the Google Cloud Datastore API
- Built menus and restructured visual effects for configuration using LibGDX

### Software Development Intern

Markham, ON

*New York Theological Education Centre*

Jul – Aug 2016, 2017

- Built a database system for a library using Microsoft Access, VBA, and MySQL
- Developed an automatic report generator for searching and updating database records, identifying and reporting overdue books, and calculating fines

## Projects

### InfiniteChess, [chjon/InfiniteChess](#)

Jan – Mar 2019

A game of chess on an infinite board using C++

- Designed a data-driven system for representing non-conventional chess pieces and developed an algorithm for scaling their moves to arbitrary distances
- Created a GUI library using the SFML library for OpenGL library

### BlockGame, [chjon/BlockGame](#)

Aug – Sep 2017

A block-based sandbox game using Java

- Utilized multithreading to update graphics in parallel with entity movement and object collision calculations, increasing system speed and responsiveness
- Implemented dynamic world generation and loading to create an infinite world

### DeltaT, [chjon/DeltaT](#)

Nov – Dec 2017

A reaction time game using C++ and an Onion Omega 2

- Designed and implemented hardware-interfacing infrastructure for a Linux system on a chip, allowing for all of the chip's GPIO pins to be used
- Created a system for scheduling code execution while minimizing input latency