

Jonathan Chung



github.com/chjon
jonathanchung.xyz



jt2chung@uwaterloo.ca
(647) 786 - 9368

Skills

Languages: C++, C, JavaScript, Java, HTML5, CSS, Python

Technologies: DirectX 12, Firebase, Redis, Flask, Linux, DynamoDB, S3, GCP, Git

Experience

2019 **Software Development Intern**, *Darkvision Technologies Inc.* (Vancouver, BC)

Sep - Dec Worked on data visualization tools and features in C++ for an ultrasound-based 3D imaging device

- Implemented a tiled HEVC video codec to optimize GPU encoding and maximize throughput
- Migrated a visualization tool to DirectX 12 HLSL to improve performance and maintainability
- Created a specialized graphing tool to correlate datasets using immediate mode graphics

2019 **Game Programmer Intern**, *Behaviour Interactive* (Montreal, QC)

Jan - Apr Worked on backend features for multiple video games in a RESTful microservice architecture

- Restructured object collection and reward systems using JavaScript (TypeScript) with Node.js
- Designed a rich presence system to broadcast and log player activity with Redis and DynamoDB
- Implemented first-party microtransactions for purchasing game items using Nintendo's REST API

2018 **Software Developer Intern**, *Universe Projects Inc.* (Toronto, ON)

May - Aug Worked on adding features and improving infrastructure for a cross-platform video game

- Redesigned item collection infrastructure for a data-driven content generation system using Java
- Implemented a system for synchronizing game objectives using Google Cloud Datastore
- Built GUI components and developed a configurable visual effects system using LibGDX

2016, 2017 **Software Development Intern**, *New York Theological Education Centre* (Markham, ON)

Jul - Aug Developed a library management application using MySQL and VBA

- Developed a library database system to manage thousands of books and hundreds of users
- Built an application for borrowing books, identifying overdue books, and calculating fines

Projects

2019 **InfiniteChess**, chjon/InfiniteChess

Jan - Mar Chess on an infinite board with customizable rules written in C++ using the SFML OpenGL library

2017 **BlockGame**, chjon/BlockGame

Aug - Sep A multi-threaded physics engine and block-based sandbox game written in Java

Education

2017 - 2022 **Candidate for B.ASc**, *Honours Computer Engineering*, University of Waterloo

Cumulative Average: 91.23% | Dean's Honours List (4 Terms) | Rank 1 out of 63