Jonathan Chung

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Skills

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

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

Experience

2019
Sep - Dec

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

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
Jan - Apr

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

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
May - Aug

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

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
Jul - Aug

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

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
Jan - Mar

InfiniteChess, chjon/InfiniteChess

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

2017
Aug - Sep

BlockGame, chjon/BlockGame

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