

WORK EXPERIENCE

Winter 2020 - Spring 2022	Freelance Multiplayer Game Developer / Remote <ul style="list-style-type: none">Integrated Python scripting feature into the existing .Net Core game serverImplemented .Net assembly hot-swap feature that supports updating game logic without rebootingDesigned and developed multiple in-game features with event manager, business rules engine, etc.
Fall 2019 Co-op Internship	Ripple Labs / Software Engineer / San Francisco, US <ul style="list-style-type: none">Implemented an internal info hub using Spring Boot & Spring Security with Auth0 integrationCreated an integration test container to test services in HashiCorp Nomad cluster
Winter 2019 Co-op Internship	Bank of America Merrill Lynch / Software Developer / Toronto, CA <ul style="list-style-type: none">Improved the search speed of a front office application by 40% with ELKImplemented a deep-learning powered log analysis PoC using PyTorch
Spring 2018 Co-op Internship	Deloitte DSpace Lab / Software Product Prototyper / Kitchener, CA <ul style="list-style-type: none">Utilized and maintained multiple IoT devices (ultrasonic sensors, cameras, and LoRa Gateway)Performed data mining and engineering on a dataset with 470 million fieldsBuilt and optimized multiple "stock level detection" ML models and achieved >95% accuracy
Spring 2017 Co-op Internship	Autodesk / Software Developer / Toronto, CA <ul style="list-style-type: none">Implemented "Zero-Downtime" feature for the web application Autodesk Fusion LifecycleReduced the average downtime for database updates from hours to secondsImplemented an event-driven non-blocking email notification feature
Fall 2016 Co-op Internship	Autodesk Research / Software Developer / Toronto, CA <ul style="list-style-type: none">Implemented a remote monitoring package using Dnsmasq and Flask to track the status of all Internet of Things (IoT) devices, and automatically resolve their domainsImplemented real-time bi-directional communication feature with WebSocketImplemented auto-deploy script to automatically update binary files on Raspberry Pi
Winter 2016 - Fall 2017	Envilink / Co-Founder / Singapore <ul style="list-style-type: none">Designed serverless stack on Amazon Web Service (AWS) for environmental researchImplemented RESTful API back end and a WeChat "mini program" frontend for real-time data visualization

PROJECTS

Fall 2021 - Present	2D Massively Multiplayer Online Game <ul style="list-style-type: none">Client (MVC pattern) & Server (ECS pattern) from scratch in C#gRPC-based communication & MessagePack powered serialization and deserializationActor threading model and aspect-oriented programming model
Winter 2018 - Winter 2020	Cryptocurrency Mining Farm Management System <ul style="list-style-type: none">Asynchronously scan miners and retrieve real-time informationPublish miners details to AWS IoT on request via MQTT over WebSocketAutomatically notify administrators on unexpected events (e.g. overheating, power outage)
Winter 2015 - Winter 2016	Data Leakage Analysis Platform <ul style="list-style-type: none">Web service where users could prevent potential social engineering attack by checking if their account information was leaked in known data breachesData was cleaned then restructured from a 2.5 TB data lake with over 10 billion entriesRelational data was stored in graph database with visual web interface with GraphQL support

EDUCATION

University of Waterloo
Bachelor of Computer Science
Winter 2016 - Spring 2022

University of Manitoba
Bachelor of Computer Science
Spring 2014 - Fall 2015

TECH SKILLS

C#, Java, Python	<div></div>
.Net, Spring Boot	<div></div>
AWS, GCP	<div></div>
Git, JIRA, Perforce Helix	<div></div>
MySQL, MongoDB, TigerGraph	<div></div>
ELK Stack	<div></div>

SOFT SKILLS

Significant experience in and enjoyment of cross-cultural working environments

Excellent problem-solving skills

Comfortable with working independently or with team