

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 server• Implemented .Net assembly hot-swap feature that supports updating game logic without rebooting• Designed 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 integration• Created 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 ELK• Implemented 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 fields• Built 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 Lifecycle• Reduced the average downtime for database updates from hours to seconds• Implemented 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 domains• Implemented real-time bi-directional communication feature with WebSocket• Implemented 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 research• Implemented 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 deserialization• Actor 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 information• Publish miners details to AWS IoT on request via MQTT over WebSocket• Automatically 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 breaches• Data was cleaned then restructured from a 2.5 TB data lake with over 10 billion entries• Relational 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	
.Net, Spring Boot	
AWS, GCP	
Git, JIRA, Perforce Helix	
MySQL, MongoDB, TigerGraph	
ELK Stack	

SOFT SKILLS

Significant experience in and enjoyment of cross-cultural working environments

Excellent problem-solving skills

Comfortable with working independently or with team