

TYLER NYCHKA

SOFTWARE ENGINEER

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ABOUT

A Software Engineering student specializing in back-end development, and programming for efficiency.

SKILLS

LANGUAGES

C/C++
Node.js
Lua
Unrealscript
Python
Java
Scala
C#
Javascript
HTML5/CSS3

TOOLS & TECHNOLOGIES

Git
Perforce
Jenkins
Docker
Spring
Mocha
Express.js
Unix Systems

EDUCATION

University of Waterloo

Bachelor of Software

Engineering 2020

Recipient, University of Waterloo
President's Scholarship of Distinction for
admission average over 95%
3.9 GPA

Twin Lakes Secondary School

2011 to 2015
Recipient, Top Academic Average (98%)
Recipient, Y's Men's Service Club of Orillia
Scholarship for exemplary leadership and
academic skills

INTERESTS

Sketching

Dungeons and Dragons · Dungeon Master
August 2018 to Present

Weightlifting

Nicolas Cage

Guitar

EMPLOYMENT

Relic Entertainment - Associate Gameplay Programmer: Age of Empires 4

May 2018 to August 2018 - Vancouver

- Worked as an Essence Engine and gameplay programmer for the upcoming title: Age of Empires 4.
- Designed, built, and fully implemented production features central to gameplay using C++ and Lua.
- Collaborated with Leads, Designers, and Artists to create and implement new features into Essence Engine's API for use by gameplay Lua scripts.
- Rewrote legacy C++ code to use modern C++11 features such as templating, variadic arguments, and universal references reducing the size of these files more than 90% and increasing memory, performance, and code stability of the Engine to Scripting API.
- Built State Tree telemetry tracks, enabling easy access to tracking of data events fired in gameplay state trees adding several new data points for tracking into telemetry data.
- Wrote documentation for the Essence Engine Telemetry System detailing both architecture and usage of the system, additionally updated existing documentation. Deleted, updated, and added 30+ confluence documentation pages.
- Performed Perforce integrations and submits using the mainline model to ensure stability across all Relic projects.

Autodesk - Fusion Backend Developer

September 2017 to December 2017 - Montreal

- Used Node.js and C++ to develop features and refactor code for the in-browser 3D modeling software Fusion360 Web, allowing for easier development.
- Integrated crucial security scans into deployment pipeline, catching and fixing 50+ major security vulnerabilities including cross-site scripting in the process.
- Created Jenkins pipeline for continuous integration, speeding up the deployment process by adding both automated testing and linting to the code submission process.
- Implemented Github code review bot for more efficient continuous integration.

ICF Olson - Full-Stack Developer

January 2017 to April 2017 - Toronto

- Created and delivered content updates using a variety of content management systems to major ICF Olson clients including OLG, Boston Pizza, and Nestle.
- Developed software to maintain and report on important server components and system information, decreasing response time to errors by up to 24 hours.
- Built and implemented new server endpoints with Spring to deliver server status information and guest information.
- Implemented endpoints using Spring and Hibernate to quickly and securely query databases.

Helpful - Full-Stack Developer

May 2016 to August 2016 - Toronto

- Developed front-end iOS application and back-end Java Spring software using the full agile development process.
- Created bash scripts and test suites to aid in deploying continuous back-end integration; decreased deployment time by up to a week for software teams.
- Optimized critical server endpoints by refactoring code to reduce response time by up to 200ms.

PROJECTS

XCOM 2: Long War Of The Chosen - Lead Mod Developer

November 2017 to Present

- Lead Developer on a team of more than 15 members dedicated to moving and expanding the Long War 2 modification for XCOM 2 to the War of the Chosen DLC.
- Collaborate with both the internal Creative team and Design team to bring new features and assets into the modification.
- Manage both new and experienced developers through the full agile software design process to implement new designs and fix bug reports.
- Deploy new packages on a regular schedule for alpha testing and balancing.

Habituca - Open Source Contributor

2016 to Present

- Contributed to the Habituca project, an open source website designed around gamifying tasks to increase productivity.
- Multiple merged pull requests fixing synchronization errors and implementing a new API token reset feature into the deployed product.
- Continuing contribution through bug fixes and feature implementations to improve the project's user experience.

Genetic Soldiers

May 2016 to August 2016

- A C++ experiment in genetic algorithms designed to find a pattern that consistently defeats a basic AI opponent.
- Created chromosome representation of AI strategy to breed new generations of AI strategies; learns to defeat an opponent in a minimal number of new generations.
- In fewer than 10000 generations creates a perfect AI that always plays the optimal strategy.