



## Overview

Seeking a position where I can effectively apply my expertise in software development, as well as learn and collaborate with others to continue my growth and experience new technologies. I'm a highly independent abstract-problem solver, with experience in low-level systems programming, and a knack for being able to understand and document existing complex systems.

### Languages

C, C++, C#  
SQL, U-SQL  
Lua, JavaScript  
Python, Shell

### Developer Tools

CMake, QMake, Xcode  
Visual Studio, Qt Creator  
CLion, Valgrind  
Git, Mercurial, Perforce

### Mathematics

Linear Algebra  
Statistics, Probability  
Calculus, Physics  
Algorithms

### Domain-Specific

Azure, Web Services  
GTest, Build Automation  
OpenGL, Compilers  
Linux systems, ALSA

## Work Experience

### ArenaNet - Software Engineer

Sep '17 - Feb '19

#### *Servicing & Support:*

- Quickly took ownership over the Guild Wars 2 MacOS client for continued support and servicing.
- Improved performance of the MacOS client by a large margin; fixed numerous bugs and I/O issues.
- Owned the servicing for large parts of the Guild Wars 2 codebase (core engine, graphics, major tools, etc.)
- Fixed complex content pipeline and graphics-hardware related issues (OpenGL and DirectX9).

#### *Communication & Collaboration:*

- Self-motivated to handle task triaging and work item organization for planning and review.
- Collaborated with other teams to provide service and support for tools that artists and designers used.
- Communicated effectively through internal blogs, detailed technical write-ups, and documentation.
- Tailored cross-discipline communication towards the target audience (artists, designers, QA, leads, etc).

### Microsoft - Software Engineer

Jun '15 - Sep '17

#### *Build & Packaging:*

- Working with Azure technologies to enable internal services (Cloud Storage, REST APIs, Automation).
- Deployed planned and hotfixed changes under multiple environments for our internal packaging system.
- Designed and implemented an API for tracking and reporting packaging payloads (C#, SQL Server).
- Delegated and gave feedback on multiple features based on payload API (design, review, feedback).

#### *Data & Analytics:*

- Crunched large amounts of data for processing and visualization (SQL, U-SQL, KendoUI).
- Built extensions for missing features in existing tools (U-SQL extensions, C# applications).
- Designed, architected, and maintained several general-purpose, high-impact data streams.
- Made servicing decisions based on the results of the data sets (filed bugs, monitored releases).

## Open Source

### KASM - A Virtual Microprocessor Assembler and Simulator

- Designed and developed a virtual microprocessor based on 6502 (cycle-accurate simulation).
- Created a custom instruction set for the circuit, and as such a custom assembler to assemble with.

### OpenSK - Open-Source Cross-Platform Sound Toolkit

- Designed and developed an API for low-level sound library abstraction (ALSA, WASM, Core Audio).
- Iterated on API specifications as more intricacies of the abstraction become apparent.

## School

### DigiPen Institute of Technology - Redmond, WA

Aug '11 - May '15

Bachelors of Science in Computer Science in Real-Time Interactive Simulation

- Magna Cum Laude, Student of the Year (2014), Dean's List