ANDREW L SMITH

Seattle, WA
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Online Portfolio: alsmith.net

SKILLS

In order of familiarity

Working Knowledge (Extremely Comfortable)

- Languages: C, C++, C#, Java, Python, SQL, JavaScript, GLSL, HTML/CSS
- Tools/Technologies: Windows, Git, Unity, Emacs, Visual Studio, OpenGL, Blender, XNA/MonoGame, Game Maker

Basic Knowledge (Some Experience)

- Languages: Assembly (x86, MIPS, ARM), TypeScript, Windows Batch Scripting, VHDL
- Tools/Technologies: Linux, MSVC, Unreal Engine, Android, Subversion

EDUCATION

Georgia Institute of Technology, Atlanta, GA 8/2013 – 12/2016

- B.S. Computer Science
  - Specializations in “Devices” and “Information/Internetworks"
  - GPA: **3.90**

WORK EXPERIENCE

Microsoft. Redmond, WA

Software Engineer – Microsoft Teams 5/2018 – 10/2018

Helped ship background blur feature on Microsoft Teams. Helped design and implemented the API to enable/disable blur on various front-end clients. Improved logging, telemetry and error reporting for background blur-related issues. Worked in C++ and TypeScript.

Software Engineer – Microsoft Dynamics 365 1/2017 – 5/2018

Worked on the Resource Scheduling Optimization (RSO) solution for Microsoft Dynamics 365. RSO is an optimization engine that solves “Travelling Salesman” style scheduling problems. Collaborated with Microsoft Research to rewrite the entire optimizer from scratch using a new, experimental approach. Responsible for continuing and maintaining the UI improvements that I implemented as an intern (see below) and for ensuring that our data-privacy practices were GDPR-compliant. Worked primarily in C# and JavaScript.

Software Engineer Intern – Microsoft Dynamics 365 5/2016 – 8/2016

Implemented various front-end improvements to a page in the Microsoft Dynamics 365 web application. Worked extensively with JavaScript and the Bing Maps API.

The Home Depot. Atlanta, GA

IT Intern – Innovation Center 5/2015 – 4/2016

Developed several prototypes with experimental hardware and software to determine their feasibility in various use cases. Technologies worked with include virtual reality, indoor positioning systems, and self-flying quadcopters (a.k.a. drones). Worked primarily in Java.

PERSONAL PROJECTS

Cataclysm 3D Game Engine (C++)

A work-in-progress 3D game engine written from scratch, with (almost) 0 dependencies. Custom code includes the following: 3D math library; OBJ file loader; resource manager; entity component system; in-game editor; 3D renderer supporting textures, normal-maps, and Blinn-Phong shading; GJK, EPA, and quickhull algorithm implementations.

Other Game Prototypes (C#, Unity, MonoGame, GML)

Several small game prototypes that I have written using pre-existing engines/frameworks for fun and enlightenment. These include 2D platformers in GML and MonoGame, and a 3D turn-based strategy game in Unity.