

EXPERIENCE

2018+	Valve Software Engineer	Building features and UX improvements for the SteamVR platform. Working with external companies to integrate new tools for our users. Using C++, DirectX 11, React, and Typescript.
2017	Microsoft Software Engineer Intern	Built new Windows experiences around novel interaction models.
2017	Google Software Engineer Intern	Empowered creativity with new features for <i>Tilt Brush</i> , a virtual reality experience for painting in 3D, including a brush stroke selection and manipulation tool. Prototyped new input methods.
2016	Google Software Engineer Intern	Reduced friction for returning users to Google's mobile flight search airport with new ease-of-use features. Used Javascript and Java. Additional project: Prototyped a virtual reality game using C# and an HTC Vive.
2015	Microsoft Software Engineer Intern	Implemented consumer-requested enhancements to the Action Center on Windows 10 and Windows 10 Mobile. Used C++/CX and Xaml.
2015	Google Software Engineer Intern	Improved scalability and performance of the open source Mercurial distributed version control system. Used Python and C.
2014	Microsoft Software Engineer Intern	Developed a web interface for managing a cloud storage solution in Azure.
2013	Unisys Software Engineer Intern	Integrated an internal patch management system with the Eclipse IDE. Used Java.

EDUCATION

Rochester Institute of Technology

B.S. in Computer Science
Member of RIT's Computer Science House → csh.rit.edu
Class of 2018

PROJECTS

Shared Environment between VR and MR → github.com/dag10/HoloViveObserver

Developed a proof of concept where an immersive virtual reality session can be observed with one or more HoloLens glasses in real time. Uses Unity and C#, built on an HTC Vive and HoloLens.

3D Engine → github.com/dag10/DrewGraphics

Ongoing development of a personal 3D engine for practicing graphics techniques. Supports forward and deferred rendering, screen-space ambient occlusion, shadow maps, and virtual reality with SteamVR. Scenes built around a composable entity component system scene graph. Uses C++14 and either OpenGL 3.3 or DirectX 11. Targets Win32 and macOS.

Dorm shower music player → github.com/dag10/Soapy

Dorm members that link their Spotify account can tap their RFID card in the dorm shower to hear their music. Uses Android, Arduino C++, PHP, and MySQL.

Real-time shared music queueing platform → github.com/dag10/DJ

Users can upload music into their song queue, join a virtual room, and take turns listening to music together. Uses Backbone.js, Express, Socket.io, MySQL, and ffmpeg.

Remotely Operated Underwater Vehicle (ROV)

Wrote on-board software in C++, and remote control software in Java.

Multiplayer Platform Game Engine

Used C++ and SFML to create a networked multiplayer 2D platform game engine.

SKILLS

Languages	C++, Swift, Typescript, C#, Python, Java, Javascript, SQL, HTML/CSS
Platforms	React, SteamVR, Qt5, DirectX 11, OpenGL 3
Tools	Vim, VS Code, Visual Studio, XCode, Unity