

## EXPERIENCE

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2018+	<b>Valve</b> 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	<b>Microsoft</b> Software Engineer Intern	Built new Windows experiences around novel interaction models.
2017	<b>Google</b> 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	<b>Google</b> Software Engineer Intern	Reduced friction for returning users to Google's mobile flight search with new ease-of-use features. Used Javascript and Java. Secondary project: Prototyped a virtual reality game using C# and an HTC Vive.
2015	<b>Microsoft</b> Software Engineer Intern	Implemented consumer-requested enhancements to the Action Center on Windows 10 and Windows 10 Mobile. Used C++/CX and Xaml.
2015	<b>Google</b> Software Engineer Intern	Improved scalability and performance of the open source Mercurial distributed version control system. Used Python and C.
2014	<b>Microsoft</b> Software Engineer Intern	Developed a web interface for managing a cloud storage solution in Azure.
2013	<b>Unisys</b> Software Engineer Intern	Integrated an internal patch management system with the Eclipse IDE. Used Java.

## EDUCATION

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### Rochester Institute of Technology

B.S. in Computer Science  
Member of RIT's Computer Science House → [csh.rit.edu](http://csh.rit.edu)  
Class of 2018

## PROJECTS

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### Shared Environment between VR and MR → [github.com/dag10/HoloViveObserver](https://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](https://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](https://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](https://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.

### Multiplayer Platform Game Engine

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

## SKILLS

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**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