

## Summary

Senior software engineer specializing in XR development with over 9 years of experience creating VR and AR applications. I am skilled in both OOP and ECS design patterns and have extensive experience with rapid prototyping.

## Experience

### Store No. 8 - Walmart

Senior Software Engineer

July 2021 - Present

#### Enterprise AR application for the Apple Vision Pro

- Led development of a feature to generate Planogram PDFs that align with industry standard formats using Swift, Firestore, and Firebase Cloud Functions
- Implemented a novel multi-threaded approach to modify component data using RealityKit
- Collaborated with senior designers to implement fundamental navigation UI using SwiftUI
- Prototype was demoed to senior leadership at Walmart and Apple including Apple CEO Tim Cook

#### In-aisle filtering application for retail shoppers

- Created a system to save, load, and adjust product locations across aisles inside all Walmarts
- Lead engineer for demos to Walmart Inc. CEO, Walmart US. CEO, and senior Walmart leadership
- Project was showcased at Walmart's CES 2024 exhibit

#### Common product platform for in-store AR applications

- Created Asset Loading and Point of Interest services using Unity's Addressables Asset System which allowed for the asynchronous loading/unloading of any asset type at runtime
- Integrated large scale Digital Twins for Walmart Supercenters
- Experimented with various authentication systems for Unity on the Magic Leap 2

#### Consumer in-store retail shopping application

- Led development on major features: shopping list, shopping cart, and 3D character state machines
- Optimized on-shelf filtering across thousands of products for attributes such as price, rating, nutritional content, etc.
- Project was demoed to Walmart Inc. CEO, Walmart US CEO, and senior Walmart leadership

### Amazon

Software Engineer

July 2020 - June 2021

- Programmed scripts to automate workflows that helped external customers resolve issues with the Title Team's services
- Resolved weekly tickets to fix bugs and implement new features

### NASA: GSFC

AR/VR Intern

June 2019 - August 2019

- Developed a program that converts reflectance data from the Lunar Reconnaissance Orbiter into Unity Terrain Meshes
- Designed modular software that allows users to construct 3D models while in VR
- Presented organization projects to multiple teams across several NASA campuses
- Mentored high-school interns by teaching them Unity & Unreal Engine 4

## Education

### Oakland University

2017 - 2019, Oakland, MI

BS Computer Science with a minor in Japanese

University Hackathon Organizer - GrizzHacks 2017-2019

## Skills

### Languages

C#, Python, Javascript, Swift, HTML, CSS, GLSL

### Software

Unity, Xcode, Git, Blender, Charles Web Proxy, Figma, Postman, Jira

### Libraries/Services

Firebase, Three.js, WebXR, RealityKit, MRTK, FFmpeg, GCP, Anti-captcha

### Hardware

Apple Vision Pro, Magic Leap 2, Hololens 2, Valve Index, Oculus DK2

## Hackathons Awards

BrickHack V: Verizon's Challenge

Riot Games Hackathon 2018: Honorable Mention

Junction Tokyo: Softbank's and IBM's Challenges

Hack The North 2017: Google's Challenge

Hack The North 2016: Top 12, Firebase's Challenge

MHacks 11: 2<sup>nd</sup> Place

SpartaHack V: 2<sup>nd</sup> Place

SpartaHack IV: 2<sup>nd</sup> Place

HackCWRU 2018: 2<sup>nd</sup> Place

SpartaHack: 3<sup>rd</sup> Place, Most Creative