

# BENJAMIN KOGA-WINN

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Senior Developer: Unity3D (Hololens, Mac, PC, iOS, Android), Maya, Modo, C4D, C#, AR/MR/VR.

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*I'm a passionate designer seeking to help others create interactive experiences and realize whole new worlds in virtual space. I strive to employ my many design and development skills in 2D, 3D and programming to build intuitive, interesting, and visually appealing experiences. Specialties: 3D design & modeling, virtual environment development, writing, programming, MR/AR/VR development, interactive retail fixtures, game design & production.*

## EXPERIENCE

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### Vizwerks

March 2012 - November 2017

#### 3D Developer & Unity3D Programmer

- Consulted on new application product designs based on client needs and technical limitations.
- Developed interactive 2D and 3D retail-assistance applications (alone and collaboratively) through the Unity3D game engine for iOS, Android, PC, Mac, Hololens, and Raspberry Pi end-users (utilizing C#).
- Managed and implemented application access to first-and-third-party interactive peripherals (such as Oculus Rift DK2, touch screens, Augmented Reality enabled devices, and gyroscopic sensors).
- Maintained and reconfigured Node.js servers on Amazon AWS EC2 instances to pass data between social media platforms and Unity applications (as well as direct access to third-party SDKs).
- Created optimized 3D assets with normal and occlusion maps for Unity applications, as well as integrated 2D and 3D art assets of team members into Unity projects.
- Modified and created custom visual effects shaders to handle visual needs not covered by Unity's default shader technology.
- Upgraded legacy Unity projects that required code-overhaul and scene management to build to modern end user devices.
- Managed collaborative group projects with Bitbucket, Github, and SourceTree source-control software.

### Hedge Your Bets LLC

March 2013 - January 2014

#### Code Team Lead

- Prototyped 3D and 2D game environments for a Clash of Clans type tower-defense game prototype called Cosmic Clash using custom

## EDUCATION

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### Portland State University

Graduated 2016

#### Masters of Science, Systems Science & Theory

- Awarded Graduate Certificate in Computer Simulation & Modeling

### The Art Institute of Portland

Graduated 2014

#### Bachelor of Arts, Game Art & Design

- Acted as the Code Team Lead for two terms of 'Game Production Team,' the ultimate course for game design students. Oversaw four programmers to create a multiplayer team-based space arena game with planetary physics (local spherical and non-traditional gravity).

### The Art Institute of Portland

Graduated 2013

#### Bachelor of Science, Visual & Game Programming

- Acted as Lead Programmer in a 48-hour Game Jam, managing four other programmers in the development of a mini-game suite.

## PROJECT SAMPLES

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### Prototype Hololens & AR Footwear Experiences

<https://connect.unity.com/p/5a15382932b306001e5a93ec>

For two new items in a line of high-end sports apparel, developed and delivered two separate experiences to showcase the items' details without the presence of a final physical product.

- For the first item, used an iPad with image-tracking to create an Augmented Reality experience where, when viewing a logo, the apparel item would load into view and could be viewed from all angles by adjusting the iPad's screen around the detected logo. The item could be moved and selected with the iPad touchscreen, as well as play video and reveal infographics.
- For the second item, an immersive Mixed Reality experience was created using the Hololens. The apparel item could be viewed juxtaposed as a 3D hologram in real world space, inter-actable with gestural controls to rotate and change the style of the item to one of several presets.

Both experiences were shown in conferences and one-on-one with key stakeholders to introduce the products.

### Adidas Gearcase (Unity Interactive Retail Installation)

<https://connect.unity.com/p/5a1538c103b002001c92f220>

Assisted on development of a Gearcase experience for Adidas - a product case and screen combined into one, using a translucent material to overlay video in-front of a physical product presentation. Tasks included:

- Generating an infinite scrolling wall of names from past runners sourced from a CSV database, with pop-up search tools to bring up information of said runners based on country/state of origin, name, date run, etc, with functionality to record messages for individual runners.
- Creation of scrolling & updating calendar pulling from an Eventbrite server curated by Adidas, as well as social media wall populated by live twitter content via a twitter crawler.
- Hitfixes, tweaks, and new features as requested by Adidas periodically.

### Adidas Runbase Boston Marathon Interactive Wall

<https://connect.unity.com/p/58a61bec09091559199ce70e>

An interactive touch-screen installation for the Adidas Runbase Boston Marathon store. Tasks included:

- Generating an infinite scrolling wall of names from past runners sourced from a CSV database, with pop-up search tools to bring up information of said runners based on country/state of origin, name, date run, etc, with functionality to record messages for individual runners.
- Creation of scrolling & updating calendar pulling from an Eventbrite server curated by Adidas, as well as social media wall populated by live twitter content via a twitter crawler.
- Hitfixes, tweaks, and new features as requested by Adidas periodically.

### Retail Fixture Planning Application

<https://connect.unity.com/p/5a153d8e32b306001e5a9476>

A mobile fixture-building system for retail stores to display products for manager overview. Tasks included:

- Recreated a depreciated project after it degraded in outdated versions of iOS and Unity.
- Recreated drag-drop code, material swapping, and reinterpreted original messaging/saving mechanics after their underlying code was no longer supported.
- Additionally provided updated 3D models for fixtures and clothing.

### Footwear Wall Planner Application

<https://youtu.be/HL-qe6ALZOo>

Solo-developed a retail fixture planning suite for several platforms (iOS, Android, PC, MAC). Users could choose between several wall styles, and assign product to each slots, demarcated through color and symbol coding as well as a serial numbers per shoe type. Database of footwear was updated each season from a spreadsheet import. Final walls could be saved/loaded later, as well as the contents of which saved and tabulated for costs and other bookkeeping. Drag-and-drop features were later added.