

WORK EXPERIENCE

Senior Interactives Engineer | Brilliant.org | August 2020 - present

I work on the Interactives team, building interactive content to teach STEM subjects, using Elm.

- implemented interactive content using Elm
- designed Elm-based APIs for use by course authors
- implemented features for course authoring infrastructure

Senior Software Engineer | Ubiquity6 | May 2019 - July 2020

I worked on a team building games and interactive experiences using the Display.land ecosystem.

- served as the tech lead on an upcoming game project
- implemented features for a photogrammetry-based social networking app using React
- built gameplay features using a ECS based game engine using JS and typescript
- implemented backend features using node, express, and dynamoDB
- built art prep tools using Blender and Python, as well as with JS and our custom tech
- implemented discord integration with a web-based 3d game

Staff Engineer | Lumos Labs | November 2017 - May 2019

I served as a Staff Engineer on the games team, which is responsible for making cognitive training games.

- Worked on a variety of game features using C# and JS, using Unity and Cocos Creator
- prototyped numerous game ideas (mainly JS / canvas)
- developed and open-sourced a lightweight JS-based game engine for rapid prototyping (stirling.js)
- developed content pipeline tools using Python and JS

Software Engineer | Google | October 2016 - November 2017

I worked as a web developer on real-time chat applications, including both Hangouts and Hangouts Chat. I built features and fixed bugs using a variety of javascript and java as well as a range of Google technologies.

Founder/President | Jamwix | May 2013 - July 2016

Cofounder / president of Jamwix, a media startup focused on making high-quality games and experiences based on creativity and playfulness.

- Designed client architecture for CineMagic: Hollywood Madness, a match-three/collectible card game mashup for iOS and Android
- Implemented game systems using Haxe / OpenFL
- Created art pipeline tools in Python and Javascript to prep art assets for CineMagic
- Implemented UI for the first feature-length film released for virtual reality (Banshee Chapter: Oculus Rift Edition, Halloween 2014) using C++ / SDL
- Implemented parody versions of Reddit, Youtube, Imgur, and the Huffington Post as part of the "Reddit3016", a satirical look at what the internet might look like in 3016 (<http://reddit3016.com/>).
- Created a demo (using Unreal) of a virtual reality content aggregation system which was shown as part of the VR Village at SIGGRAPH 2016

Lead Gameplay Engineer | KIXEYE | August 2011-May 2013

I joined KIXEYE just before War Commander launched, and helped to grow it into a top-rated strategy game on Facebook with 100k daily active users.

- Managed a team of 9 client developers
- Provided technical designs for numerous game systems
- Implemented numerous game systems spanning all aspects of the game using AS3 and C++
- Released new features and bug fixes on a two-week release schedule
- Worked with server teams to add a persistent world map to the game post-launch
- Worked with server teams to add synchronous PvP combat to the game post-launch

Senior Software Engineer | Cull.tv | January 2011-June 2011

Worked on both front-end (JS, jQuery) and back-end (PHP, MySQL, Node.js) development for Cull, a social video site.

- Used the Facebook API to create a channel of videos from videos posted by people in your social network
- Implemented a system to collect feedback from users on new features
- Implemented playback controls and user interface elements using JS / jQuery

ABOUT

I'm a highly skilled generalist, at my best when working with others to deliver amazing experiences.

PUBLICATIONS

Maya

Programming with Python Cookbook

PACKT Publishing, July 2016

SKILLS

Gameplay Engineering, Javascript, Elm, Node.js, ThreeJS, WebGL, Python, Lua, Unreal, Unity, Mentorship, Game Design

EDUCATION

MFA Arts, Computation, Engineering

University of California, Irvine. 2003-2005

BFA, Time-based and Electronic Media

Carnegie Mellon University, 1997-2001
Served as a TA for Randy Pausch's "Building Virtual Worlds" class

Senior Software Engineer, Playstation Home | Sony Computer Entertainment, America | September 2008-January 2011

I was a member of the PlayStation Home Product Development team, which was responsible for creating levels, games, and virtual items for PlayStation Home.

- Designed a wide range of games and interactive experiences
- Implemented a wide range games using Lua and the Home SDK
- Designed a large-scale system to support rapid deployment of gameplay elements
- Designed a system to allow non-engineers to quickly and easily author narrative-based gameplay in Home
- Designed one of the most highly-trafficked levels in Home (the Playground)

Software Developer | Millions of Us | January 2008-June 2008

I served in the engineering department of a small agency specializing in created branded experiences in virtual worlds and new media

- Created interactive experiences in several different platforms, including web-based ARGs and consoles
- Implemented arcade games and interactive objects in Playstation Home using Lua
- Designed and implemented (in Flash) the final puzzle for the Terminator: Dark Discovery ARG (official Honoree, 2009 Webby awards)

Web Developer | Linden Lab | November 2006-January 2008

I worked as a web developer in the Creative Services team.

- Developed numerous internal web applications to make company processes more efficient and easier/more pleasant to use
- Personally responsible for significant components of internal infrastructure

Instructor | Academy of Art University | January 2003-May 2007, February 2010-December 2011, January-May 2016

I've worked at AAU as an instructor in the 3d animation, New Media, and Game Programming departments, teaching both undergrads and graduate students.

- Taught classes in game programming with C++
- Taught classes on web technologies (JS, MySQL, PHP, HTML, CSS)
- Taught classes on various aspects of Maya and MEL scripting
- Created materials for online classes
- Served as an advisor for master's degree students

Virtual World Developer | Eldervision | May 1999-January 2001

Created objects, environments, and animations both pre-rendered and real-time, for use in an 3d internet application for the elderly.