

## Employment History

**Spry Fox, a Netflix Games Studio**, Remote (November 2019 to Present)

**Senior Advanced Game Engineer**,

Shipped **Cozy Grove**, a life sim in unity. Nominated for DICE Family Game of the year 2022.

Working on a Cozy MMO in Unreal Engine 5, announced in pre-alpha as “Codename Project Friendship”.

- *Gameplay*: Sole programmer on quest and narrative scripting system to support early blue sky prototype iteration through later live maintenance. Implemented ProcGen terrain “recipes” algorithm and contracts guaranteeing item spawns on valid maps. Contributed to design of quest, festival events and navigation features. Implemented, optimized and polished several small features including clothing, multiple dynamic input systems (Keyboard/mouse, gamepad, and touch), and localization including Right to Left language support.
- *Engine*: Contributed bug fixes to Unity's new Input System package, which were accepted into Unity's codebase.
- *Leadership*: Highly involved in strategic discussions regarding team composition and personnel decisions. Acted as hiring manager in several roles as the studio experienced hyper growth post acquisition, more than doubling in size to over 50 people. Responsible for 1:1s with several engineers and risk evaluations.

**Ubisoft San Francisco**, San Francisco, California (January 2018 to October 2019)

**Senior Software Engineer I**,

I worked on 2 unannounced projects and **XDefiant** as a Generalist/Gameplay Programmer in proprietary C++ engines.

- *Gameplay*: Prototyped 3Cs (Camera/Controls/Character) and game modes for multiplayer action game. Programmed synced script nodes for gadgets. Owned navigation AI including updating engine nav interface to support multiple types of AI sizes, new navlink types, and better debugging tools.
- *Tools*: Responsible for programmer and designer “Tech Validation” automated test scripts run before every perforce check in including troubleshooting and maintenance, which caught many dependency issues and contributed to a culture of not ignoring warnings. Quality of life workflow improvements such as C# examples for designers on automating repetitive tasks and writing functionality of testing with multiple clients on one machine easier.
- *Leadership*: Mentored and managed day to day activities of summer interns. Trained with the team that designed proprietary engine and created written documentation for San Francisco and future teams new to the tech stack. PR trained to represent Ubisoft at Grace Hopper Conference and several student talks.

**Anki Inc**, San Francisco, California (November 2015 to December 2017)

**Software Engineer**,

I worked on the robot pet, **Cozmo**, which combines robotics, gaming, and toys. When shipped it sold out its initial run on Amazon and was the #1 bestselling smart toy, winning several consumer awards.

- *Gameplay*: Programmed minigames. Wrote a dynamic difficulty system. Created and iterated on First Time User Experience Onboarding. Used Unity 5's uGUI to create flexible views. Implemented AI freeplay behaviors, states and goals.
- *Engine*: Integrated 3<sup>rd</sup> party libraries (e.g. text-to-speech, crash reporting.) Implemented input filtering for accelerometer.
- *Tools*: Wrote unit tests for asset validation. Extended debug menu to display unified data from multiple sources making it cleaner for QA to use. Created initial Maya to robot animation exporter, later the subject of my GDC 2017 talk.

**Hackbright Academy**, San Francisco, California (January 2017 to April 2017)

**Lab Instructor, Intro to Programming (part-time)**

I lectured, advised and assisted students in the 12-week Python programming class.

**Insomniac Games**, Burbank, California (May 2011 to November 2015)

**Gameplay Programmer,**

Came onboard during the final year and shipped **RESISTANCE 3** (PS3) and 2 DLC packs. I went on to other projects including **FUSE** (XBOX360/PS3), **SUNSET OVERDRIVE** (XBOX ONE), and **RATCHET & CLANK** (PS4.)

- *Gameplay*: Prototyped hero gadget ideas. Worked closely with designers to architect and iterate to find the fun in the collectibles and progression systems (including skill trees, team perks and XP.) Integrated PlayStation®Move controls in **RESISTANCE 3**.
- *Systems*: Took ownership of Scaleform middleware integration now used as a shared project.
- *User Interface*: UI programmer across the HUD, lobby and pause menus. Worked with producers and artists to fix hundreds of must fix localization, optimization and TCR/TRC bugs.
- *AI*: Worked with designers on behaviors for enemies and bosses using decider trees and creating scripting functionality.

**Six Degrees Games**, Marina Del Rey, California (July 2010 to May 2011)

**Flash/Flex Programmer,**

I developed immersive experiences as part of the MMO/virtual world **ACTION ALLSTARS**. At this startup I worked on a variety of elements including network code, stand alone flash games, and optimizations.

- Optimized the world to consume 20 to 80% less CPU usage and increased frame rate by at least 10% on low end machines by rewriting sections of rendering code using my knowledge of flash and profiling memory leaks.
- Gameplay work included: Created monthly seasonal content and missions based on existing framework. Created a Box2D physics game that had the highest subscriber conversion rate of any other subscription upsell opportunity. Created real-time multiplayer tower defense game. Developed an engine and first mission for adventure game series. Assisted 3<sup>rd</sup> party developers with debugging and integrating games. Sole developer on client-side implementation of pets
- Wrote SQL queries for business analytics, suggested design improvements based on this data.

**Big Fish Games**, Seattle, Washington (May 2007 to July 2010)

**Game Developer,**

I developed and helped project manage several social online casual games with a team of artists, designers, and testers per project as well as programmed any needed tools that were required.

- Programmed and shipped 3 Java applet games, 6 Flash games, and 1 Java server; all of which stayed in the top 10 most played games for months after their launch.
- Wrote technical specifications describing how games would communicate with back-end servers. This process uncovered several potential issues that would have cost hundreds of man-hours to resolve and led to improving communication between the Game and Engineering teams.
- Wrote and maintained a dev server environment and improved the team's build process.
- Assumed the responsibility of SDET and wrote testing code and QA tools; contributing to having the lowest bug count on the team.
- Maintained and updated code written by third party contractors.

## Education

**DigiPen Institute of Technology**, Redmond, Washington (2003 – 2007)  
**Bachelor of Science**, Real Time Interactive Simulation (Computer Science)  
**Minor**, Mathematics

## Technical Experience

C++, C#, ActionScript 2.0/ 3.0 (FLASH), Java, Objective-C, Python, Lua, JavaScript, Excel VBA, Scaleform, Unreal (UE4 and UE5), Unity, SVN, Perforce, Git, JIRA, DevTrack, Fogbugz, Trello, Favro

## Speaker

- Figuring Out How Things Work in an Unfamiliar Codebase - GDC 2022, Rated in top 50 speakers, 300+ attendees
- Cozmo: Animation Pipeline for a Physical Robot - GDC 2017
- Localizing games for a worldwide audience - GaymerX 2015
- Board Game Design Workshop - Girltopia for the Girl Scouts of Greater Los Angeles 2013

## Shipped Titles

- Cozy Grove (Apple Arcade/PC/Nintendo Switch 2021) nominated DICE Family Game of the Year
- Cozmo (Connected Toy - iOS/Android 2016)
- Ratchet and Clank (PS4 2016)
- Sunset Overdrive (Xbox One 2014)
- Fuse (PS3/Xbox 360 2013)
- Resistance 3 (PS3 2011)
- Action AllStars (Online Flash MMO 2010)
- Treasure Quest (Flash for facebook 2010)
- Amazon: Hidden Expedition (iPhone/iPad 2010)
- Team Bingo (Maintained - Flash game and java server for Big Fish Portal 2009)
- SnowGlobe Slots and Looking Glass Slots (Flash game for Big Fish Portal/facebook 2009)
- Diana Fortune and the Lost Temple of Gold (Java applet for Big Fish Portal 2009)
- L.O.B.E. (Java and Flash port game for Big Fish Portal/facebook 2008/2009)
- Unwell Mel (Java and Flash port for Big Fish Portal/facebook 2007/2009)