

Creative programmer, sound artist and game developer designing playful interactive systems including mobile, XR experiences.

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Employment

January 2018 - Present : ustwo games - Game Developer

- Alba: a Wildlife Adventure: Worked on many different aspects of the development from prototyping with the studio art director to shipping the project as a team of 25. My role included rapid prototyping, developing tools for quest design, building the AI system, audio programming, haptics and interaction design.
- Monument Valley 2: The Lost Forest Expansion: Worked on level design, implemented UI and supported artists + designers as part of a new chapter made for UN-REDD's Playing for the Forest initiative.
- Lands End: In 2018 I helped port Land's End to Oculus Go, redesigning and implementing an in-game photo system using the 3DoF controller while maintaining backwards compatibility with GearVR. In 2021 I was the sole developer tasked with updating the game to run on current standalone VR headsets.
- Sound design for Monument Valley 5 year anniversary update.

September 2016 - April 2017 : Skoogmusic Ltd - Game Developer

- Prototyped musical educational games in Unity for use with the Skoog controller. Encouraging accessibility in gaming and music.
- Created an interactive onboarding scene using three.js for the Skoog Swift Playground, launched at WWDC 2017.

Spring 2016: University of Edinburgh - Tutor

- Unity, FMOD + Pure Data tutor for the Interactive Sound Environments Masters course, introducing students to dynamic sound design implementation techniques and building procedural sound systems.

Summer 2014 : Krotos Ltd - iOS Prototyper

- Developed an iOS application adaptation of the Dehumaniser vocal effects processor using Pure Data and Objective-C.

2010 - 2013 : Warner Music Spain - Artist

- Wrote, performed and produced album, "Binary Sun" in collaboration with DJ Jose Padilla for Warner Music Spain.
- Managed the project budget and produced artwork and music videos for the album and its singles.
- Single "Dragonflies" reached top 10 in the MTV Spain Chart.

Independent Game Projects

Petiole - 2022 : Snap Spectacles lens which aims to make playing music approachable through an interactive AR sound object as part of the Snap Creator program.

Sigil - 2020 : A playable instagram face filter for the Now Play This festival of experimental game design. Players were encouraged to explore different facial expressions and physical movement to unlock playful animated interpretations of the festival's sigils.

Plaything - 2019 : Dynamic sound implementation and additional gameplay programming for a web based game where the player builds and nurtures a geometric character. Made in collaboration with a small team commissioned by V&A Dundee to mark the opening of the Videogames: Design/Play/Disrupt exhibition.

It's Lit - 2017 : Christmas tree decorating game for iOS making use of the 6DoF potential of ARKit to encourage playful physical interactions.

Move! - 2017 : An experimental room scale VR party game for HTC Vive. Controllers track the player's hips instead of their hands to dance through holes in a series of moving walls. Exhibited at V&A (London) Friday Lates and Arcadia (Dundee) games festival in September 2017.

Fit In - 2017 : AR game for iOS where the player dances their way through a series of moving walls. The character must rotate and position themselves to fit through cut out shapes in each wall, using the device's gyroscope and onscreen controls. Featured on the App Store's "Get Started with AR" section. Made using Unity, Blender and ARKit.

Hedra - 2015 : A one touch infinite scroller for iOS and Android. The player rotates 3D shapes to align them with a series of platforms to land, coloured face down against the clock. The game has been included in multiple game showcases across Scotland, Germany and the United States. Made using Unity, Blender and FMOD.

Katakata - 2014 : An interactive kinetic sound sculpture based on a Jacob's Ladder toy, using a web app to allow smartphone users to trigger movement and manipulate the sculpture's sound in real-time. Made using Max/MSP, Arduino, Node.js, web-osc.

- Edinburgh International Science Festival, National Museum of Scotland, Edinburgh, April 2017
- Blank Arcade, Hannah Maclure Centre, Dundee, August - October 2016
- Gap In The Air: Festival of Sonic Art, Talbot Rice Gallery, Edinburgh, January 2015

Education

2014 - 2016 : MScR Sound Design by Research with Distinction - University of Edinburgh - supervised by Martin Parker

- Playing With Code: Mobile Play for Dynamic Audio - A portfolio of game based interactions with dynamic audio for mobile devices.
- Interactive Sound Environments - A collaborative work developing 3D game environments using Unity, Blender, FMOD and procedural sound generated in Pure Data.
- Introduction to Interaction - Theme based Flash and HTML5 projects about Pictish sites of interest.

2010 - 2014 : BMus Music Technology - First Class Honours - University of Edinburgh

- Music Technology Project - Exploring rule based composition, I constructed an interactive peg solitaire board designed to control an automated monochord using Arduino. Sounds were triggered and manipulated in real-time using Pure Data on a Raspberry pi.
- Electroacoustic Composition - Portfolio of music concrete works with live multichannel diffusions, and web hosted binaural sound walks documenting the changing soundscapes of Edinburgh's coastal towns.
- Film Music Pre and Post 1950 - Live electroacoustic improvisation to Man Ray's Etoile de Mer and analysis of film soundtracks.
- Realtime Computer Systems for Music (Max MSP) - Building game driven free improvisation systems using bespoke hardware and realtime sound analysis. - Algorithmic Composition and Signal Processing (Common Lisp)

Technical Expertise

- Software: Unity, Lens Studio, Blender, FMOD, Wwise, Pure Data, Max/MSP, Flash, Spark AR, Xcode, Pro Tools, Logic.
- Programming: C#, GLSL, Javascript, C, HTML5, CSS3, Swift, Objective - C, Processing.
- Experience developing for a wide range of platforms including: iOS, Android, VR, Snap Spectacles, ARKit, Instagram face filters, micro controllers and embedded systems using Arduino and Raspberry Pi.

Presentations + Workshops

- March 2021 - Future Art interview, BBC Radio 4
- May 2019 - Arcadia - Soundscapes Panel, V&A Dundee
- May 2019 - University of Edinburgh - Playful Interactions with Sound and Games
- April 2017 - Dialogues - When Art Meets Technology, Edinburgh International Science Festival.
- March 2017 - GDC Roundup - IGDA Scotland, Dundee Workshops.
- Winter 2016 - Building tin can synthesisers, balanced contact microphones and hydrophones, Room to Play, Tinderbox Orchestra.
- November 2016 - Integrating Pure Data in Unity, University of Edinburgh,
- October 2016 - Mentor - Awedio jam, Edinburgh, helping composers, sound designers, musicians, voice actors and other audio creatives create dynamic and exciting sonic pieces

Conferences

- An Exploration of Peg Solitaire as a Compositional Tool - Poster presentation at the Conference on New Interfaces for Musical Expression, London, 2014.

Awards

- 2021 Apple Design Award for Social Impact for Alba a Wildlife Adventure at ustwo games.
- 2018 & 2019 - BAFTA Crew games participant
- 2017 - IGDA Women In Games Ambassador - Received a scholarship to attend GDC in San Francisco.