

Recent graduate with a first-class honours master's degree in computer science from University College London, games-industry experience, strong programming skills and in-depth knowledge of and love for game development

Technical Skills

- **Languages:** C++, C#, Python, JavaScript, C, Java, Go, GLSL, SQL
- **Tools:** git, Visual Studio, Visual Studio Code, GitHub, GitLab, Unity, Bash, Node.js, Docker
- **Knowledge:** networking, algorithms, component systems, graphics, modelling, texturing, unit testing
- **Libraries:** C++ Standard Library, SFML, React, Redux, Express

Games Industry Experience

Junior Software Engineer

Wonderstruck Games

July – September 2020

Guildford, UK

Keywords: C++, Python, FBX, JSON, Maya, Visual Studio, cmake, graphics, modelling, animation

- Developed a C++ tool to convert FBX files to a JSON asset format based on an existing tool that converted from the DAE format
 - Analysed the specifications of the asset format and existing tool to translate these to the new tool
 - Designed the new tool to be as fast as the old one and produce assets 10% smaller in some cases
 - Gained an in-depth understanding of areas of modelling including meshes, skeletons and animations
 - Updated the Python asset compile process for the Boundless game to use the new tool
- Added a feature to the Boundless game whereby some creatures would float and play special animations in water and lava instead of sinking to the bottom and drowning as they previously had been
 - Gained an understanding of one way animations, entity actions and entity AI states can be linked in a game as well as how a component system works

Projects

Portal 2D

May 2021 – Present

Keywords: C++, SFML, game engine development

- Developing a 2D game based on Valve's Portal from scratch in C++ with SFML
- Also developing a custom game engine from scratch to facilitate the game
- Intention is to gain useful skills in game development and game engine development in C++

KTaNEAU

October – December 2020

Keywords: VR, Unity, C#, git lfs, collaborative development, social, multiplayer, networking

- Developed a VR game inspired by Keep Talking and Nobody Explodes and Among Us as part of a team
- Involved players collaborating to complete a series of tasks in VR, with some requiring interaction between multiple players and some requiring cooperation between players in different locations
- Was personally responsible for developing the networking side of the game which required creating a server-client-like system and managing messages sent between clients
- Also developed the game logic and how it interacted with the various tasks as well as the game UI

Dino Jump

October – November 2017

Keywords: C, Processing, Arduino, OpenSCAD, electronics

- Developed a clone of the Chrome dinosaur jumping game that appears when you have no internet
- Designed the game to be controlled by a simple controller connected to an Arduino which would act as a motion controller and react to 'jump' movements
- The controller also had a button for menu navigation and a buzzer for simple sound effects

Other Experience

Software Engineering Intern

Thirdfort

June – August 2019

London, UK

Keywords: JavaScript, Go, Node.js, React, Redux, ArangoDB, Express, Mocha, Chai, Docker, API, full-stack, databases, Agile, code reviews, unit testing, CI/CD, startup

- Worked as a full-stack developer on the company's core product, a web app and accompanying API which enables conveyancers to perform ID checks on their clients to facilitate on-boarding
- Responsible for developing major product features, fixing bugs, performing code reviews and participating in weekly planning and retrospective sessions
- Researched, planned and started to implement a major infrastructure change where backend features were moved to a separate microservice written in Go and communication was performed via a Kafka queue

Education

University College London

MEng Mathematical Computation (aka Computer Science with Maths)

2017 – 2021

London, UK

- First-class honours (80%)
- Modules completed include: Computer Graphics, Virtual Environments, Software Abstractions, Software Architecture, Computer Systems

Interests

- **Games:**
 - Favourite genres: Indie, Platformer, Strategy, Puzzle, Sandbox, Rhythm, Racing
 - Favourite games: Breath of the Wild, Super Mario Odyssey, Pokémon, Minecraft, Terraria, Factorio, SteamWorld series, Celeste, Fez, FTL, Stardew Valley, Undertale, CrossCode, Creeper World series
 - I particularly enjoy playing indie games due to their inventiveness and originality. You can often also sense the passion that went into making them.
- **Programming:**
 - Fell in love with it around age 13 when first introduced to it at school
 - Quickly realised the sheer power and flexibility it had to do pretty much anything you could imagine
 - Enjoy solving programming problems succinctly and efficiently
 - Often wonder while playing games how I might implement a certain feature if I was programming it myself
- **Sports:** Regularly play friendly games of football. Cycle for travel and pleasure.
- **Music:** Enjoy listening to a wide variety of music. Play the piano in my spare time. Like to learn the piano versions of the soundtracks to my favourite games.