PERSONAL DETAILS

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ABOUT ME

I am a gameplay programmer with 3 years of industry experience at Cloud Imperium Games, working on Squadron 42 and Star Citizen. At CIG I took ownership of an important legacy system which I supported through multiple core engine changes including persistence and server meshing. I have also worked closely with design, art and engine teams to design and implement a modern replacement for said legacy system, accounting for both historical and future needs of the project, with an emphasis on maintainability and in-house workflow improvements. This work allowed me to take advantage of proprietary engine features and develop my skills in both threaded and asynchronous programming.

Having worked with CryEngine/Star Engine (CIG), the Rage Engine (Rockstar), the Unreal Engine (Yaldi Games) and Pada3D (ToonTown: Corporate Clash) I am very experienced with quickly picking up game engines and other proprietary tools.

Outside of work I'm interested in computer architecture, electronics, esoteric programming languages, Warhammer, board games, crochet and of course video games. I also very much enjoy reading, mainly sci-fi/fantasy, my favourite series being The Expanse.

My current project is a programming environment for esoteric language called EsoProg which currently only supports Piet and BrainF*ck. I love the silly esoteric programming languages, so I plan on adding support for Pi, Goldf*ck, Ork, Moo and Auld Lang in the near future.

CURRENT EMPLOYMENT

2023 – Ongoing (2 years)	Gameplay Programmer II Cloud Imperium games	Designed, implemented and refactored complex gameplay systems for engine upgrades such as entity streaming, persistence and server meshing on top of my previous responsibilities.
October 2022 – 2023 (1 years)	Gameplay Programmer I Cloud Imperium games	Maintained core gameplay features in both single and multiplayer environments. Supported upcoming releases and implemented gameplay systems for the single player game squadron 42.

EMPLOYMENT HISTORY

June 2022 (2 months)	Gameplay/AI Intern Rockstar Games	General bug fixing and refactoring for GTA 6. I learnt about perforce, bug management tools, ImGui and data driven design.
July 2021 (2 months)	Software Developer Intern Scholarship Recipient ThorLabs	Developing core systems in their software with C# and .NET Debugging hardware communication protocols
June 2021 (1 month)	Game Developer Intern Yaldi Games	Developed game system and features including a weather manager (and effects) in C++ for unreal engine
July 2019 (2 months)	Programmer Intern Robotical Ltd	Developing addons for Marty V2 (The second version of their robot) Programming, Communicating with Product Designer, Circuit design
June 2019 (1 month)	Computing Camp Coach Firetech	Teaching Python to children aged 10-18 years Designing teaching sessions to fixed learning criteria

HIGHER ACADEMIC QUALIFICATIONS

September 2018 – 2022 Artificial Intelligence and Computer Science (BSc Hons), 1st class University of Edinburgh

My dissertation was concerned with methods of integrating functions represented by neural networks using the weights of those networks, specifically applying this to estimating optical density through vdb volumes.

LANGUAGES & TOOLS

C++	I have extensive experience with C++ using it throughout my professional career as well as in my personal projects and academic career. In this time I have gained experience with the standard library, common debugging tools, ImGui, premake, cmake, vcpkg, as well as threaded and asynchronous programming.
Perforce	I am very familiar with perforce using it in my workflow daily.
Jira	At CIG I've used Jira for managing my sprints, making feature requests and planning feature work.
Git	I use git to maintain my personal projects and used it to collaborate with other developers on ToonTown: Corporate Clash
Markup Languages	I have a lot of experience with XML and other markup languages from data driven projects as well as experience building websites (e.g. my personal website)
Python	Python is the first language I learnt and I am familiar with using it for quick prototyping.
C# and .NET	I learnt C# and.Net for an internship with ThorLabs where I wrote a system to port settings between versions of their software Kinesis.
Java & Haskell	I learnt Java and Haskell at university for both object oriented and functional programming.