

STEPHEN ARNOLD

Phone number: +44 7539901671

Email: stephenarnolddev@gmail.com

Portfolio: <https://stephenarnolddev.com/portfolio/>

PERSONAL PROFILE:

UK based game programmer with over 5 years of industry experience and a focus on Unity and C#. From roguelite platformers to multiplayer sandbox games, I've shipped titles across Steam, PS5, Xbox, Switch and mobile, working on everything from AI and gameplay systems to backend integrations and network programming. Currently working as a self-employed contractor, most recently leading gameplay development on Clawpunk and building complex AI systems for Super Dark Deception. Equally comfortable owning a feature end-to-end or slotting into an existing team. Strong advocate for clean architecture (ECS/DOTS, OOP), internal tooling and mentoring junior programmers.

SKILLS:

- ❖ Programming with C#, C++, Java, Python, Javascript, PHP and Lua.
- ❖ Experience with Unity, Unreal, Android Studio and Gamemaker Studio.
- ❖ Understanding of programming with:
 - Gameplay (Pathfinding, State machines, Behaviour trees)
 - Multiplayer (Client/Server, Svelto ECS, LiteNetLib, Photon, Unity NGO)
 - Backend integration (Steam, Epic, XSolla, Custom)
 - Multithreading (Unity Jobs, Burst, Svelto ECS)
 - Physics (Havok)
 - UI (Svelto GUI)
 - Analytics (Unity/deltaDNA) and GFX/VFX (Shader graph)
 - Debugging and Profiling (Advanced networking, threading issues and optimisation)
 - Architecture (ECS, OOP, DOTS, Svelto)
- ❖ Other tools used include: Git, Perforce, Visual Studio, Rider, Maya, Blender, Trello, Jira, Confluence and other core development software.

EXPERIENCE:

APRIL 2025 – ONGOING, AI PROGRAMMER (CONTRACT), GLOWSTICK ENTERTAINMENT

Working with Glowstick Entertainment as an AI programmer to create the enemies and their complex logic in Super Dark Deception, which is a 2D demake of the horror game Dark Deception on PC, consoles and mobile. Working with the team to capture the magic of the original in a 2D form, including work on boss fights, pathfinding, state machines, behaviour trees, navigation meshes and dynamic difficulty scaling.

MARCH 2025 – NOVEMBER 2025, LEAD PROGRAMMER (CONTRACT), KITTENS IN TIMESPACE

Worked as a lead programmer on a 2D platformer roguelite action game called Clawpunk. Responsible for taking ownership of features from concept to execution, working with the team to optimise gameplay and player experience.

- Gameplay & AI: Enemy and boss gameplay, AI systems, dynamic difficulty and combat balancing.
- Systems: Saving/loading, inventory systems, analytics and UI.
- Platform integration: Steam and Epic integrations, achievements and platform-specific optimisations.
- Tooling & QA: Built internal tools for development and QA workflows.

JULY 2021 – SEPTEMBER 2024, PROGRAMMER, FREEJAM

Programmer at Freejam working on Robocraft 2 and Techblox, using an ECS approach to gameplay and systems programming in Unity with C# and Havok physics. Delivered features end-to-end from technical design through to testing across multiplayer networking, multithreading, UI, analytics and GFX/VFX, including diagnosing and resolving complex networking and threading issues. Worked within an iterative Agile environment, collaborating cross-discipline with artists, designers and QA to meet evolving requirements. Some highlights include:

- Network optimisation: Built a network performance analysis system and developed a priority-based state synchronisation system that significantly reduced bandwidth usage across multiplayer sessions.
- Tooling: Created Unity editor tools and spreadsheet tooling for designers, artists and QA to speed up production and enable isolated feature testing.
- Community Robot Factory: Collaborated with the backend team to implement a UGC storefront where players could upload, share and purchase community creations using hard and soft currencies, with secure transaction handling to protect the in-game economy.
- Destruction system: Built a block-based destruction system using connection health and damage propagation, where damage spread through neighbouring blocks based on their connections, enabling realistic structural collapse during combat.
- Mentorship & code quality: Mentored junior programmers joining the team, led code reviews and provided architectural feedback to senior developers on major engine features.

Technologies: Unity, C#, JavaScript, ECS, DOTS, Svelte, Burst Compiler, Perforce, JetBrains Rider, Shader Graphs, Confluence

2019 – 2021, UNIVERSITY MENTOR AND DEPARTMENT OF NETWORKS & DIGITAL MEDIA WORKER, KINGSTON UNIVERSITY

Worked as a mentor in the Computer Science Department of Kingston University. Acted as an assistant to newer students to help them understand the lessons and generally assisted with programming. Also worked as a teaching assistant for first-year modules within the course.

EDUCATION:

- ❖ 1st class Computer Games Programming BSc (Hons), Kingston University, 2018 – 2021
- ❖ 3 A levels in Mathematics, Physics and Chemistry and an AS level in Computing

EXTRACURRICULAR:

2025-PRESENT, FANTASY CARD GAME

Developing a Slay the Spire-inspired fantasy game in Unity using Unity's Netcode for GameObjects and Lobby services, where players team up and compete in minigames.

2019-2021, VARIOUS GAMEJAMS

Participated and won awards in several gamejams hosted in person around Kingston and online. Details for each can be found in the full portfolio.

2018-2019, MODULE CO-ORDINATOR, CODERDOJO HAM

Head of a voluntary monthly course that taught children aged 7-17 to code games online within Roblox.

PROJECTS:



Clawpunk - [Kittens in Timespace]

2D action platformer with rogue-lite elements. Using 9 characters with 9 lives to progress through 5 punk themed worlds and bosses.

Technology: Unity with C# for Steam, PlayStation 5, Switch 1, Xbox Series and Switch 2



Super Dark Deception - [Glowstick Entertainment]

2D Horror maze runner with various monsters and boss fights.

Technology: Unity with c# for Steam, Mobile, PlayStation 5, Switch and Xbox Series



Robocraft 2 - [Freejam]

3D multiplayer and building block-based machines and combat game. Published to Steam.

Technology: Unity with C# (ECS with DOTS/Svelto) on PC



Techblox - [Freejam]

3D multiplayer sandbox with block-based creation, racing and destruction

Technology: Unity with C# (ECS with DOTS/Svelto) on PC

REFERENCES: AVAILABLE ON REQUEST