

# Jacob D Taylor

Portfolio: [blastinghavoc.github.io/portfolio](https://blastinghavoc.github.io/portfolio)

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Experienced game developer with a background in computer science. 3+ years working in c++ on a high fidelity live release MMO. Particularly interested in gameplay systems development and cooperative multiplayer.

## Employment History

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<b>Cloud Imperium Games:</b> Working on Star Citizen MMO in c++	Dec 2022 - Present
Gameplay programmer 3, feature owner of 6+ features, mentor to Juniors	
Gameplay programmer 2, feature owner of 4+ features	Dec 2021 - Dec 2022
Gameplay programmer 1, feature owner of 2+ features	Jan 2021 - Dec 2021
Reference: Thorsten Leimann, Lead Systems Designer, <a href="mailto:thorsten@tleimann.de">thorsten@tleimann.de</a>	
<b>Amazon:</b> Software Development Engineer intern, web-dev in Java and JS	Jun 2019 - Sep 2019

## Education

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<b>MSc Computer Games Technology:</b> City University of London, 1st Class	Sep 2019 - Oct 2020
<b>BSc Computer Science:</b> University of Warwick, 1st Class	Oct 2016 - Sep 2019

## Technical Skills

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**Programming languages:** C++, C#, Java, Python, GLSL, Javascript

**Game Technologies:** Star Engine, Unity, OpenGL, Monogame

**Misc:** Event-driven and data-driven architecture, multiplayer networking, parallel processing, code reviewing, performance optimisation, unit testing, procedural generation

## Key Projects

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- **Star Citizen MMO**
  - Multiple appearances on both live and pre-recorded company media discussing my features.
  - Loot Generation system designed to be highly data-driven, handles rarity, container size constraints, special events, and mission-specific loot. Comprehensive dev tool suite.
  - Salvage profession, includes “hull scraping” and “structural salvage” gameplay across two salvage ships, multiplayer gameplay, VFX, SFX and UI hooks, designer tools for balancing.
  - Maintainer of Room System (gas / breathing simulation and trespass detection) and Harvestable System (procedural generation of plants, minerals, loot containers and scrap for professions gameplay). Continuous updates to keep up with engine changes, and production of dev tools for designers and QA. Code reviewing of related work.
  - Close involvement with Production for planning, triage, estimation and team management.
- **Voxel Terrain Engine for Unity (MSc project):**
  - Simplex noise heightmaps, biomes, caves, ores and trees, procedural mesh generation.
  - Unity Job System and Burst compiler for parallel processing.
  - Extensive unit tests via Unity Test Framework.
- **“Orbital” 2D arcade shooter/ tower defence hybrid made in Unity, published on Itch.io**
  - Sprite-based animation using Unity Animation system.
  - Data driven unit stats, buffs, and upgrades systems, multiple enemy and allied unit types.

## Hobbies & Interests

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In my free time I like to work on my own game projects, practice singing, work out and swim. I’m always looking for new exciting experiences to try which have so far included indoor skydiving, flying 3 different types of aircraft, scuba diving, and blacksmithing my own sword.