

Josh McCamley

Technical Game Designer

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Technical Game Designer with **3+ years** of professional experience bridging high level design with optimized **C++** and **Blueprint** implementation in **Unreal Engine 5**. Specialized in designing and implementing full AI ecosystems, fully **replicated** character controllers, and live inventory systems. Proven track record leading cross disciplinary teams to deliver tight game feel and accessible technical documentation, validated by successfully securing **studio funding**.

Experience

JUNE 2023-PRESENT | Technical Game Designer & Co-Director | Mad Moon Studios | Belfast, Northern Ireland

- Secured **£60,000 incubation funding** from Northern Ireland Screen; utilized the budget to hire and **manage freelancers**, maintained **accessible** technical documentation, implementation rules, and tech support pipelines for the broader team.
- Implemented a highly optimized, **FLECS** based projectile system in C++, resulting in a **131x improvement** in CPU Game Thread time (simulating 100,000 projectiles), exposed in Blueprints for usability.
- Designed and Scripted a flying enemy ecosystem utilizing **A* pathfinding** and Unreal's **Environment Query System**, enabling complex, state-driven evasion maneuvers **responsive** to environmental geometry and combat thresholds.
- Developed a fully **modular, replicated** player character featuring a custom momentum based 6DOF movement controller, utilizing Anim Blueprints and **procedural animations** to accelerate character **asset iteration**.
- Designed and programmed a **runtime editable**, grid based inventory system, allowing for seamless in-game loadout upgrades and dynamic integration with world events.
- Built **ProcTex**, a custom Unreal Engine **Plugin** with native UI integration to optimize the studio's **technical art pipelines** via real time 3D previews and procedural texture baking.
- Designed, programmed, and released **Shoot To Die**, an experimental 3D FPS prototype developed part-time in a single week for the **Devs Under Duress Game Jam** to validate core mechanical loop with **player feedback**.

SEPTEMBER 2023-JUNE 2024 Enterprise Placement Year (EPY) Developer | Mad Moon Studios | Belfast, Northern Ireland

- Turned a traditional academic placement module into a **funded** studio venture, establishing Mad Moon Studios as a commercially viable, legally compliant entity.
- Engaged with **rapid prototyping** methodologies to iterate on core mechanics, ensuring **early validation** of game feel prior to scaling full production, with each sprint being followed by Playtests, accumulating **hundreds** of players' feedback.

Skills

Unreal Engine 5 | C++ & Blueprints | Systems Architecture | AI (EQS, A*, Behavior Trees) | Multiplayer Replication
| Procedural Animation | Tool Creation | Technical Documentation | Team Management | Flow Diagramming

Education

Bachelor of Arts (Hons) Games Design | Ulster University | Belfast, Northern Ireland

- First Class Honours; Awarded **highest grade** in the graduating cohort.
- Participant in the Enterprise Placement Year (EPY) program, securing a **Distinction** and **Diploma in Professional Practice**.