

# Corbyn LaMar

## Technical Designer and Gameplay Engineer

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### Skills

**Languages:** C/C++, C#, Unreal Blueprint Visual Scripting, Java, Python

**Software:** Visual Studio, Perforce, Git, GitHub, SVN, Figma, Valgrind, Doxygen, Blender, Word, Excel, PowerPoint

**Engines:** Unity Engine, Unreal Engine, C++ Custom Engine

**Game Design:** Level Design, Grayboxing, Encounter Design, Layout Planning, Systems Design, UI Implementation, User Interface Design, User Experience Design, Design Documentation, Paper Prototyping, Playtesting, AB Testing

**Programming/Math:** Object-Oriented Programming, Data Structures, Memory Management, Network Programming, Algorithm Design/Analysis, Agent Artificial Intelligence, Code Reviews, Pair Programming, Unit Testing, Automation, Code Documentation, Engine Architecture, JSON Serialization/Deserialization, File I/O, Debugging, Linear Algebra, 3D Vector Math, Calculus, Discrete Mathematics

### Projects

#### Technical Designer [Academic Project]

August 2024 - Present

##### *Eidolon: Fate of Fools* | 3D Arena First Person Shooter (Unreal, Blueprints & C++)

9 Person Interdisciplinary Team

- Grayboxed and iterated on 3 multiplayer arena maps, integrating gameplay and level features to encourage strategic player movement.
- Engineered C++ and Blueprint scripts to visualize telemetry data for grid-based heatmap analysis of player fps and level metrics.
- Implemented networked arena mechanics, including weapon and player spawning systems, bounce pads, moving platforms, and a spline-based propulsion tunnel to empower designers with dynamic tools.
- Coordinated playtests of LAN and Steam network systems, including a 40+ person public stress test to validate technical performance.

#### Technical Designer [Academic Project]

August 2023 - April 2024

##### *Cats N Critters: A Dungeon Claw-er* | 3D Top Down Dungeon Crawler (Unity, C#)

10 Person Interdisciplinary Team

- Architected modular, procedurally generated dungeons using wave function collapse for creating scalable and varied level layouts.
- Optimized level systems with unit testing, telemetry, and data analysis, enhancing performance and gameplay for over 200 rooms.
- Developed gameplay mechanics, including moving platforms, interactive triggers, and level-based hazards to enhance player experience.
- Maintained the game's creative vision through user stories, design documentation, and team alignment leading up to a Steam launch.

#### Technical Designer | Quality Director [Bun Bun Games]

April 2023 - October 2023

##### *We're Tethered Together* | 2D Puzzle Platformer (Unity, C#)

10 Person Interdisciplinary Team

- Designed 5 levels to adapt to evolving game mechanics, ensuring dynamic and engaging player experiences throughout development.
- Created UI prefabs for the pause and main menus, cutscene manager, and tutorial items, enhancing player navigation and experience.
- Debugged elements like button doors, moving platforms, and the enemy system, balancing difficulty to ensure fluid player interactions.
- Showcased by Seattle Indies at the Washington Gaming Expo 2024 with over 96% positive reviews out of 193 reviews on Steam.

#### Software Engineer | Co-Producer [Academic Project]

August 2022 - July 2023

##### *Inline: Out of Time* | 2D Time Attack Action Platformer (Custom Engine, C++)

12 Person Interdisciplinary Team

- Authored and playtested gameplay mechanics, including adaptive targeting, delivery objectives, and a dynamic camera system.
- Crafted a custom OpenGL-based graphics engine, optimizing rendering pipelines for performance and maintainability.
- Iterated on core engine systems, including the mesh manager, rendering pipeline, and JSON-serialized particle system.
- Collaborated on the game production cycle utilizing weekly sprints, leading to a successful publish on Steam.

### Experience

#### Teacher's Assistant - Level Design Methods | System Design Methods

August 2023 - Present

##### *DigiPen Institute of Technology*

Redmond, WA

- Assisted in teaching procedural and handcrafted level design techniques, emphasizing player guidance and engagement.
- Guided students in comprehending principles and practices for creating and balancing resources in gameplay systems.

#### STEM Class Instructor

June 2024 - August 2024

##### *Open World*

Redmond, WA

- Fostered collaboration and problem-solving skills by engaging K-12 students in interactive learning experiences within game design.
- Produced curriculum modules combining technical concepts with creative problem-solving to inspire young learners.

### Education

#### Bachelor of Science in Computer Science and Game Design

April 2025

##### *DigiPen Institute of Technology*

Redmond, WA

- Dean's List (2021 - Present)