

Game Level Design of Custom ECS Engine
(Technical Report)

Loot Boxes and Gambling: ESRB's Perspective
(STS Research Paper)

An Undergraduate Thesis Portfolio
Presented to the Faculty of the
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In Partial Fulfillment of the Requirements for the Degree
Bachelor of Science in Computer Science

by

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How can video games be improved? Good video games entertain players without exploiting them.

How can rendering in a game engine be improved? Game engines are approaching capability limits, constraining rendering. An existing engine was further developed and adapted to an original design of an example level for a game. I improved the engines ability to render object files and built a game level using this engine. The success of this capstone would mean more students can build upon the engine in the future. Future researchers may further develop the engine, as an educational exercise or for better game play.

How does the Entertainment Software Ratings Board (ESRB) defend loot boxes in video games? A growing share of the video games industry's revenue is from an in-game mechanic called loot boxes. Income from loot boxes has risen 150% since 2015. However, loot boxes are controversial because they resemble gambling and target a younger audience. With the ESRB, the industry's self-regulatory body, has the same Board of Directors as the industry's trade association and has been headed by a CEO of a AAA game company. ESRB is controlled by the industry it is supposed to regulate.

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