

## Honors Research Title:

Beyond the bytes: A critical look at the environmental sustainability within the video game industry.

## Honors Research Summary:

I would like to research the modern problematic aspects of the video game industry. I would like to research one of the following subjects for my thesis project.

1. How can the carbon footprint of video game developers and video gamers be reduced?
2. What natural and mineral resources are required to produce gaming hardware and technology and how can they be sourced more ethically and environmentally responsibly?
3. What is the impact of the video games industry on electronic waste and what are some solutions to reduce / recycle waste?

From my research, I would like to create a VR art gallery experience within Unity with a collection of digital 3D dioramas inspired by my research.

## Resources, Materials, and Equipment

I have all the hardware and software to author the content. The only equipment I would need to present this project is access to a VR headset. I would use the software: Unreal Engine 5 (Real-time 3D Engine), Blender (3D DCC Tool), Substance Suite (3D Texturing Programs), Adobe Suite (2D Graphics), Quixel Suite (3D Asset and Texture Library). I would use my laptop, drawing tablet, sketchbook, and pencils to create the content and write my thesis.

## Plan of Study (Fall Semester 2023)

1. Read Books and Online Resources Related to each of the three topics I would like to learn about.
2. Take Notes, Annotate, and Create Sketches based on information I read in the books.
3. Write my thesis proposal based on my findings (Finalize Research Methods).
4. Compile Visual References for the Gallery and Dioramas.
5. Create detailed sketches and floor plans for the Gallery and Dioramas.
6. Use Blender, and Substance Suite to author assets and Import into Unreal Engine.
7. Get Feedback, Continuously Research, and continuously write about my topic.



Museum of Natural History Diorama (left) 3D Mockup of Digital Diorama (right)

**Research/project goals for the semester:**

Finalize Topic

Literature Review

Finalize Design Process

Analyze Findings

Write Conclusion

Identify Limitations and Implications

Write Manuscript

**Course requirements**

OCT 20, 2023

Honors Thesis Proposal due to the Thesis Mentor

NOV 3, 2023

Revised Thesis Proposal due to the Second Reader. Include Title Page with Thesis Mentor signature.

NOV 29, 2023

Submission of Thesis Proposal to University Honors Program Director. Include Title Page with Thesis Mentor and Second Reader signatures

DEC 6-7, 2023

Oral Presentations of Thesis Proposals & After Director approval: Registration form for HON 488 – Honors Thesis

Spring 2024

Work on thesis project while registered for HON 488 – Honors Thesis • Cohort is eligible to apply for Thesis Enhancement funds

Summer 2024

Work on thesis project

Fall 2024

Complete thesis while registered for HON 488 – Honors Thesis. • Precise due dates for Mentor, Second Reader, and Director submissions will be available at the beginning of the Spring 2024 Semester; anticipate a schedule similar to the deadlines for the Proposal