

CS148 Summer 2025- Final Project

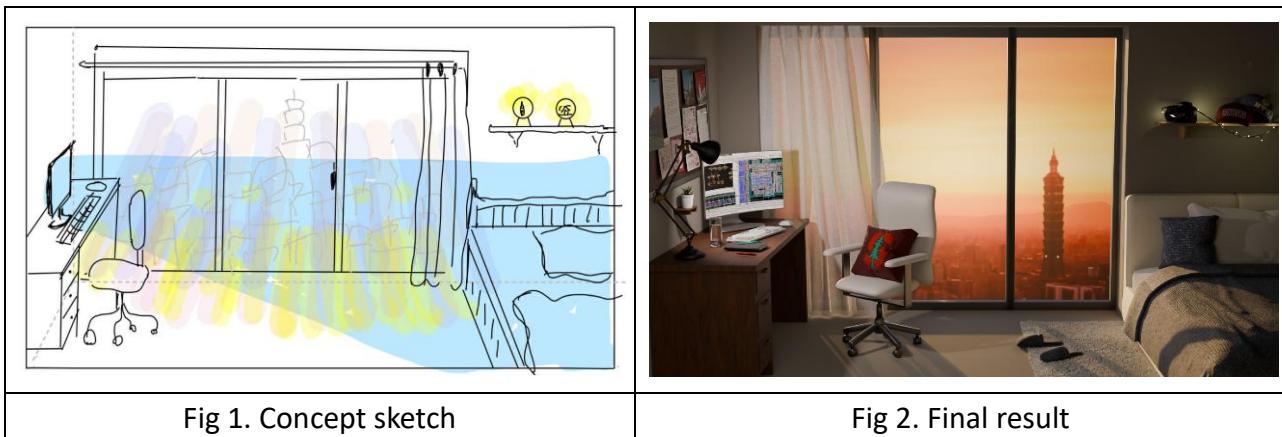
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I. Inspiration

I created an image of a warm, cozy room filled with elements that reflect my background, personality, and interests. Outside the window is a sunset view of my hometown, Taipei. On the left sits a desk with a monitor displaying Cadence Virtuoso, the circuit simulation environment I frequently use for my research to show my identity as an EE student.

Throughout the room, I incorporated Stanford elements, such as those on the pinboard and the fluffy pillow. On the other side is a comfortable bed, topped with a shelf holding a camera and two caps. The camera symbolizes my passion for photography, while the caps bear the logos of Stanford and my university, National Taiwan University.

I also played extensively with lighting, blending different sources to create unique visual effects and a warm, inviting atmosphere.



II. Final Project Requirements

i. Leveraging the power of ray tracing

I combined multiple light sources to craft a dramatic sunset atmosphere inside the room.

The main lighting elements include:

- **HDRI:** Sets the overall outdoor light color and casts the soft, beautiful window shadows ([source](#)).
- **Multiple area and point lights:** Enhance the warmth and richness of the sunset colors, while brightening selected indoor areas.
- **Lamp and monitor:** Use emissive textures to illuminate the desk, which serves as the focal point of the scene.
- **Fairy lights:** Balance the darker areas on the right side and add a subtle, cozy glow.

Together, these lights produce natural reflections, transmission effects, and gentle color bleeding, contributing to the scene's warmth and realism

ii. Main geometry from scratch

Geometry Created by Me

Below is the list of objects I modeled from scratch, along with the tutorials I followed for reference:

- **Office Chair** – <https://youtu.be/49RcVL1nnA0?si=7V8TEGQkMx8e3cy6>
- **Fairy Lights** – <https://youtu.be/4wZvJJAb66c?si=9Eq2KpN5HMW1vPn6>
- **Cap** – <https://youtu.be/mMWgPyPlilM?si=ljCJcx6JJlu2TE9Y>
- **Glass of Water** – <https://youtu.be/91V7G8LFxj4?si=wySV0laxJ0HqyknN>
- **Bed** – <https://youtu.be/ZBqBkM7w3ik?feature=shared>
- **Monitor** – <https://youtu.be/Gp9pO2-WLn8?si=0Bu4ITVuDBFr78vZ>
- **Desk** – <https://youtu.be/o9NciBsec1Q?si=3lbr319nwHO1ARBL>
- **Lamp** – https://youtu.be/q5lmw_T8Ep4?si=4r0czFml5Julf5gm
- **Book** – <https://youtu.be/0YF0reReehI?si=4CISCdYIsZk9VLsR>
- **Curtain** – <https://youtu.be/38Mzjsn-cqg?si=N65qacUJjhr5YrQ>
- **Window** – modeled entirely by myself

Imported Geometry

The following assets were imported from external sources:

- **Keyboard** – [TurboSquid](#)
- **Mouse** – [TurboSquid](#)
- **Pencil** – [TurboSquid](#)
- **Carpet** – [TurboSquid](#)
- **Slippers** – [TurboSquid](#)
- **Camera** – [TurboSquid](#)
- **Plant** – [Poly Haven](#)
- **Pin Board** – [CGTrader](#)

Note: The scenery outside the window was created with ChatGPT.

iii. UV mapping and texturing from scratch

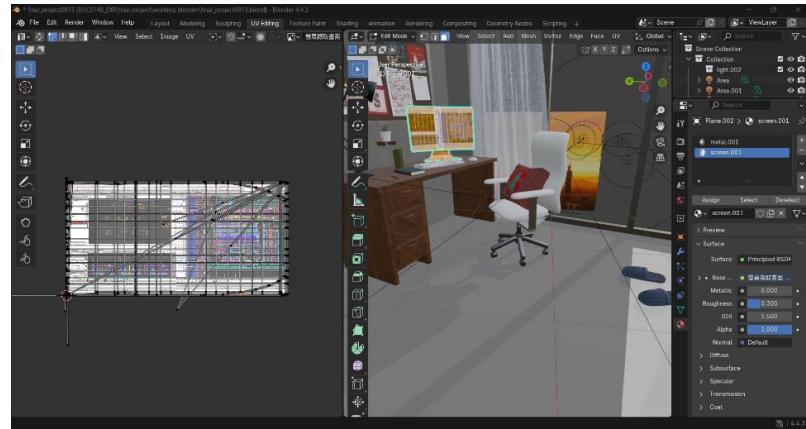


Fig 3. UV-unwrapped the monitor

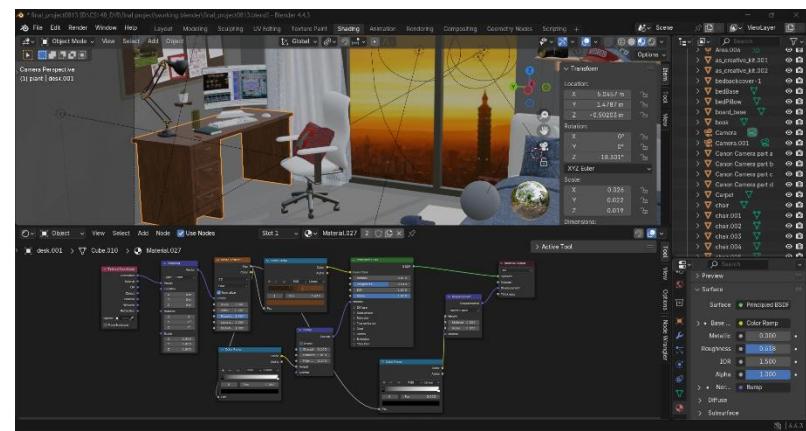


Fig 4. Created the dark wooden texture from scratch

iv. Blender/Cycles advanced feature

I used depth of field in my scene to softly blur the view outside the window, drawing the viewer's attention toward the desk as the focal point.

v. Contributions

This is an individual project. I did it all on my own.