

# 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.

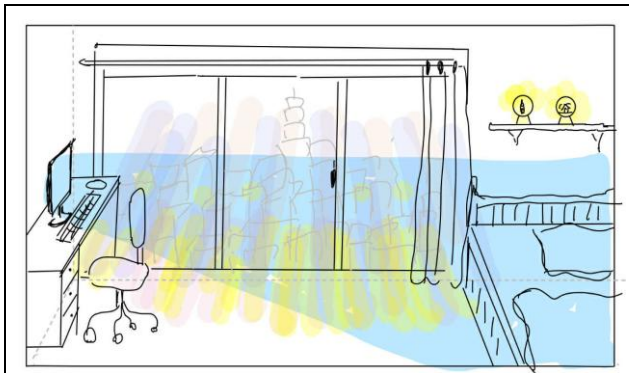


Fig 1. Concept sketch



Fig 2. Final result

## 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/mMWgPyPliIM?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](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

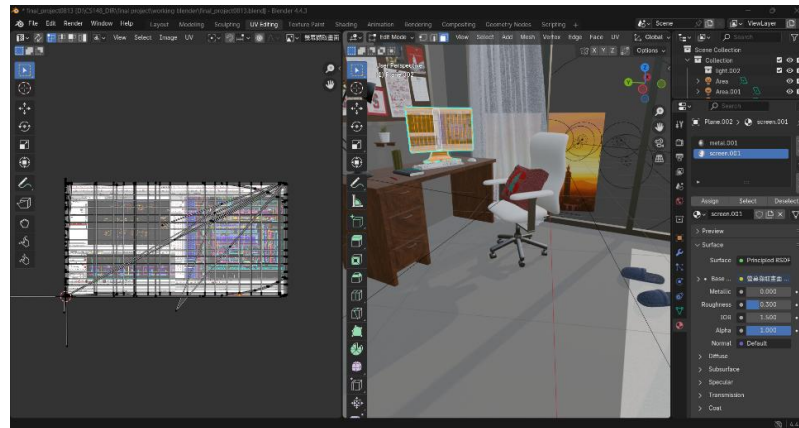


Fig 3. UV-unwrapped the monitor

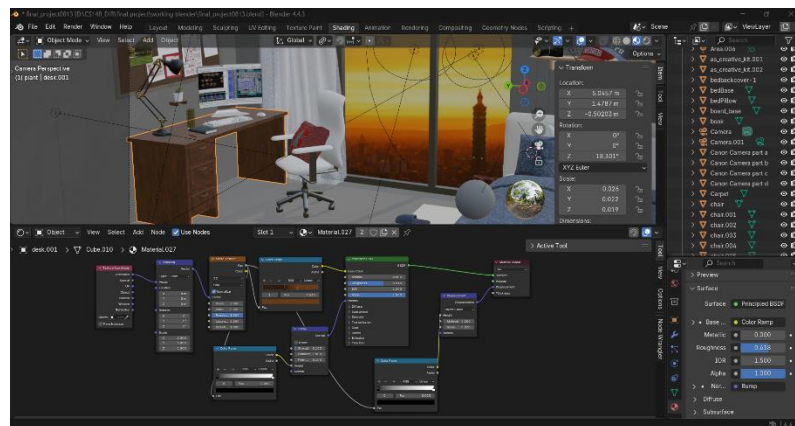


Fig 4. Created the dark wooden texture from scratch

### 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.