

# CS148 Final Project Report

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## Overview & Motivation

For my final project, I set out to recreate a warm, heartfelt moment inspired by one of my favorite films, *Marcel the Shell with Shoes On*. The movie's gentle, documentary-style storytelling and tactile miniature world resonated deeply with me, and I wanted to capture a similar emotional tone through my rendered image. My goal was not simply to model small characters, but to portray a complete narrative feeling in a single frame: one that communicates tenderness, resilience, and the quiet beauty of looking closely at everyday life.

The scene depicts Marcel and his grandmother, Nana Connie, standing proud in the small garden they built together in a wooden planter box. Their makeshift home is not grand or elaborate; it's a product of creativity, resourcefulness, and perseverance in the face of hardship. In the film, Marcel and Nana Connie have been separated from the rest of their shell family due to a sudden and tragic event. I wanted to reflect that backstory in the atmosphere of my render: despite their isolation, the characters stand with a sense of closeness, contentment, and pride in the life they've managed to build.

On a thematic level, the image symbolizes the idea of finding joy and meaning regardless of circumstances, and highlights the beauty of intergenerational relationships. It also invites the

viewer to consider scale and perspective, to imagine that small, vibrant worlds might exist right under our noses. By incorporating household objects and repurposing them as industrial materials (i.e. using push pins for constructing a bridge and pencils as plant stakes), I aimed to subtly reinforce the shells' tiny size while maintaining an intimate composition. The zoomed-in camera angle encourages the viewer to share the perspective of someone who has paused to notice something that would otherwise go overlooked.

Ultimately, I wanted the final image to feel cozy, heartfelt, and quietly alive, in the spirit of Marcel's world.

# Inspiration

My primary reference was a still from *Marcel the Shell with Shoes On*, shown below:



In this frame, Marcel and Nana Connie stand together in their garden planter, surrounded by soil, sprouting plants, and a self-made rock path. Several aspects of this reference guided my artistic and technical choices, influencing the scene layout, camera setup, materials, lighting style, and overall mood of my final rendered image:

- **Emotional tone:** The frame conveys warmth, safety, and tenderness. The soft lighting and shallow depth of field give the miniature world a cinematic, handcrafted feel.
- **Material and scale cues:** Everyday objects and textures like the wood grain, push pins, and pencils are rendered in a way that communicates how small the characters are, without overt exaggeration.
- **Character design:** Marcel and Connie's shells, eyes, and small accessories (such as Nana Connie's tiny crocheted hat) provided direction for modeling style and surface material.
- **Composition:** The tightly framed camera angle places the viewer at eye level with the characters, reinforcing their presence despite their size.

# Techniques

## Lighting

I used Nishita Sky as my primary lighting source to achieve the soft, natural illumination characteristic of outdoor environments. To further emphasize the characters, I added a couple subtle artificial lights. These helped shape the shells, bring out the curvature of their eyes and bodies, and gently guide the viewer's attention toward Marcel and Nana Connie without compromising the natural feel of the overall scene.

## Geometry

I modeled Marcel and Nana Connie entirely by hand, including their shells, googly eyes, shoes, smiles (constructed using Bezier curves with increased bevel depth), and the rope tied around Nana Connie's hat. These were created using a combination of polygonal modeling, hand sculpting, and guidance from online tutorials. I also created the planter box and miniature bridges from scratch. The remaining objects (pencil, push pins, plants, rocks) were sourced from online models.

## UV Mapping and Texturing

I performed UV unwrapping on the planter box planks and applied wood textures with custom adjustments to match the worn, lightly stained look and wood grain direction from the reference. Nana Connie's shoes and the soil received custom UV layouts as well, allowing me to paint and modify fine details.

While I sourced most base textures online, I made substantial modifications to the soil, wood grain, and shells. These modifications included adjusting color ramps, hand-painting details, adding layered noise textures, and incorporating displacement maps to achieve the tactile, handcrafted look inspired by the film while creating unique touches on my own image.

## Advanced Rendering Features

I incorporated depth of field to direct the viewer's attention toward Marcel and Nana Connie. The blurred foreground and background help convey the "zoomed in" feeling central to the film's visual identity, inviting the viewer to feel as though they are peeking into a tiny hidden world that could have easily gone unnoticed if they weren't paying attention.

# External Sources

- Googly Eyes: <https://www.youtube.com/watch?v=MkNGvYYDjhM>
- Shell: <https://www.youtube.com/watch?v=ic9gbO7Pk3c&t=1s>
- Hat String/Rope: <https://www.youtube.com/watch?v=F5YwrUTUAV0>
- Mouths: <https://www.youtube.com/shorts/hAimnFlabVI>
- BlenderKit: via Blender add-on, exact link not available.
  - Pencil
  - Push pins
  - Plants
  - Rocks