Introduction

Hi everyone, my name is Rachel, and my thesis project centers around an 18-inch 3D sculpted and printed figurine named Nova. Through her, I explore themes that matter deeply to me: inclusivity, identity, and mental health, especially for people who often feel unseen or misunderstood. I chose to express this project through a figurine because it let me showcase both my 3D skills as a 3D artist and my storytelling as an illustrator. Turning something internal into a physical object felt important for a character whose entire story is about being seen.

Story

Nova is a humanoid whose body has been altered through forced technological integration. She lives in a society where her senses and perceptions are regulated, and whole parts of the world are hidden from her.

But she begins experiencing glitches, brief moments where she can see more than she is supposed to. Instead of viewing these moments as insight or a gift, Nova believes she is the malfunction.
That feeling of being treated like you are the problem simply for being yourself became the emotional core of my project.

Personal

Nova is also personal to me because, as an Afro-Latina woman with diagnosed social anxiety, I have spent most of my life wanting to be seen but not always understanding how. As I've grown I started to understand that being seen, to me, means speaking up for myself, being vulnerable with people, and sharing my voice. One of my brothers always tells me that I have so much to say, but he never understands why I don't share my thoughts with others.

I suppose growing up, constantly moving around, I became less interested in making friends that would only last momentarily. All that including having 2 popular outspoken brothers, dealing with people whispering about me on the way to class, starting confrontation because of my long hair that ran down to my waist or encountering uncomfortable or dangerous situations simply for asking people to leave me alone, all made me feel like my voice did not matter.

That social anxiety became even worse after joining the military, a place where your voice truly holds no value. It was there that I learned a much harsher understanding of what it means to be a Black woman whose voice is dismissed before she even speaks. All of that lives inside Nova.

The Why?

And that ties into one of the statements that started this whole project for me: "No shade, but there's no color."Figurines physically take up space. They live on shelves, in collections, in places people look at every day.

Nova taking up space is symbolic. She represents someone who rarely appears in those lineups, and I wanted her presence to challenge what we usually see on those shelves.

Research/World Build

From there, my process began with research and emotional exploration. I started pulling visual references that captured isolation, softness, and the mental despair beneath the surface. I pulled space-related inspiration from one of my favorite childhood games, *Space Channel 5*, the simple nostalgic character look from Little Nemo: Adventures in Slumberland, and lastly from the exaggerated caricature style of The Boondocks. I wanted Nova to feel simple, sci-fi inspired, and emotionally grounded without being overly dramatic.

As I thought about her world, I explored how her posture and silhouette could reflect her inner state. That shaped the biopunk influence behind her world. Biopunk is a subgenre of science fiction that is grounded in the control aspect of environments where body modification is forced upon society, making characters adapt both physically and emotionally. It's not like other punk subgenres about shiny futuristic cities. It literally about grounded environments shaped by technology. Nova's glitches, her restricted perception, and the quiet tension in her expression all grew out of that worldbuilding.Her design and her world formed together finally.

Design

My first sketches often end up being the strongest because they capture my initial emotion. Once I felt confident in her silhouette, I had to consider practicality. I wanted Nova to stand on her own since she would become a vinyl-style figurine. Dramatic poses would have been exciting, but stability mattered, so that guided her final stance.Once I had her pose and design locked in, I refined the sketch with my mentor's feedback. I don't usually create consistent turnaround drawings, but for this project I slowed down, went back, and explored variations.

Small changes in proportion completely shifted her mood. One of my favorite parts of this phase was experimenting with color. Nova's palette leans cool and futuristic, but her skin tone is the warmest part of her design. That warmth highlights her humanity.

Sculpting

After finalizing the design, I moved into sculpting within the 3D program Blender. Digital sculpting feels like doodling in three dimensions for me. I started with a blockout using simple primitives shapes like cylinders, spheres, and cubes to get a feel for her overall shape and flow. I also had to keep her future printability in mind, making sure overlapping forms or extreme angles would not cause any issues later.

Then I moved into forming details in Nomad Sculpt. I used this program to finish most of the model since I'm constantly on the go and traveling between classes. In Nomad, I refined her anatomy, shaped her hands, face, and developed the look of her outfit. I wanted her to feel structured yet soft, so I kept her shapes mostly round in areas like her cheeks and her hair. Any shape edges I made soft as well like her shoulder pads.

This reinforces the balance of her soft human side with her mechanical one. I also played around with applying the colors onto the 3D model, adding her cool-toned palette.

Printing

Once the sculpt felt complete, I began preparing her for printing. This was my first time 3D printing something at all, and also my first time printing at this scale. I had to break her into parts, from major limbs to the torso, the head, and other smaller elements because the printer itself isn't tall.
At first, I thought this would be the easiest part. It was not.

Struggles

The head was the biggest challenge because it had the most detail. I originally wanted to separate the ears, goggles, hair, lashes, and eyebrows so they would be easier to paint. But that created new issues.

The goggles did not fit over her head correctly. The small pegs for the ears kept snapping off. Hot gluing Filament (also known as FDM which is a sort of plastic) together is definitely not ideal. Test prints at a smaller scale were hard to evaluate and more fragile, and larger prints took four or five hours each, only for me to realize the pieces still did not fit.

Then there's the issue with the supports. Supports are Tree like branches for any floating areas as it prints from bottom to top. Your remove them once the print is done. Some parts didnt need supports depending on the angle it was printed at, like some of the test figures where the neck stayed supported by the body. But when I added supports anyway, removing them became a nightmare. I broke Nova's neck more times than I want to admit. Instead of being the fixer from Toy Story 2 I felt like Syd instead.
Infill was another technical challenge. Infill determines how dense a part is. The default is usually around fifteen percent, but Nova is top-heavy. So her bottom sections needed higher infill to balance her weight evenly. I did her shoes and legs at 25%. That 10% increase meant adding 2 hours extra to the print job.

Lastly, once I started assembling the figurine, I moved on to painting, which became another struggle. Painting would have been easier if time had been on my side. After daylight savings, I found myself struggling to get the colors right because I would come home from class after 5:40, and painting under fluorescent lights is never the same as painting under natural sunlight. Another issue was mixing the airbrush paint.
To get the exact colors for touch-ups, the paint needs a very specific consistency, almost like soy milk. If it is too watery, the paint runs or leaves spray marks. If it is too thick, it clogs the airbrush needle. And because of this, I could not pre-mix a full cup of paint and save it for later. Anything left sitting would start to thicken. All of these technical hurdles gave me a whole new level of respect for toy designers and the work they do.

Figurine World/History

Working through these challenges pushed me to look deeper into the history of designer toys. Designer toys became popular in the late 1990s in Hong Kong, especially through the work of Michael Lau. He is a contemporary artist best known for his "Gardener" series, which featured around ninety-nine vinyl toy characters and introduced a new visual language to the vinyl toy world. His work helped shape what designer toys are today.

I also learned the differences between toys, figurines, and sculptures. Toys are mass-produced for play and safety in mind. Figurines are made for collecting or display, often using vinyl or resin which carry toxins. Sculptures are handcrafted, usually abstract and rooted in artistic expression. So why are many figurines still called vinyl toys? The term comes from the designer community. It made the pieces feel

playful and approachable for target audiences (makes sense) while the term toy carries a sense of nostalgia for the artist.

Representation Gap

Understanding vinyl toys terminology is one thing but representation is another. When you visit Popmart (either in stores now or via online), you see endless rows of pale porcelain figures.
Precious Moments is a classic figurine company, but again, there is very little color. Although I didn't see any. Brands like TinyTiny, Chaka Candles, La-Fufus and more, repeat the same aesthetic. Even when artists explore mental health through figurines, like the Crybaby series which I love, the characters still reflect only one demographic.

As colored women, we are constantly overlooked and rarely welcomed in many spaces. Imagine being seven years old and already developing mental struggles simply for existing as who you are. Our lives often feel shaped around prioritizing other people's comfort. When certain styles make us feel normal and safe we are reminded everyday. Everyday. That we can't look that way or have those mannerisms, etc. If you are a Black cosplayer, people say, "That character isn't Black." If you are alternative, punk or emo, people say, "That's weird. Rock and metal were never for black people". And those back handed compliments, if you are a dancer or actress, someone will always comment, "Yeah she's is talented, but why does she look so masculine. She not feminine enough." We are judged before we even arrive. I want every colored woman and little girl to know they can show up however they want: expressive, bold, soft, strange, creative. They are beautiful in every version of themselves, and they deserve to be recognized.

Future Direction

Looking into the future, I want to acknowledge and hopefully work along side with companies who are trying to move toward inclusivity in mind.
Skullpanda, created by Chinese artist Xiong Miao, has included characters of color in several of her collections. Peach Riot is another brand doing great work with their character Frankie, who has blue hair, is bold, cool, and diverse in styles.

As for myself, I want to continue developing figurines independently and eventually build my own collection of characters from Novas same world perhaps. Working on this project has shown that there's no limit now to what I can do. Especially with the skills I've learned from both at LA film school and here at PNCA. I want to explore opportunities in games and indie animation studios, where character design and emotional storytelling come together.

Nova is only the beginning of the kind of creative practice I hope to grow into. One that blends representation, design, and heartfelt storytelling in meaningful ways.

Lastly I would like to dedicate this to my abuela also known as my Gma who passed away this summer and the person who made me fall in love with the fantasy world of sci Fi. She told me, just last Christmas, to continue to be myself and never allow others to keep me quiet. Thank you.