Static 3D Model:

Documentation

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What it is:

For this project, I created a 'teddy bear' model using Blender. It includes the 3d model itself, as well as a colorful rug the bear is standing on. There were also changes made to the camera angle, lighting position, and background color of the world.

How I built it:

This model was created using Blender. By watching Andy Harris' YouTube videos on Blender, I followed a similar approach. I started with a cube, and subdivided the cube by 3. Using these new vertices, I was able to 'extend' blocks from the original cube in order to create the shape of a teddy bear. I first started with the head; I subdivided the cube to get an idea of where I want the ears to be, then added in another cube mesh to make an ear. I re-scaled the cube to fit the size of an ear, and placed it where I wanted on the head. When I was happy with how it looked, I duplicated the ear and put it on the other side. Then, I set the whole object aside and started to work on the body. I started with a cube again, and subdivided it again. I created a neck be extending part of the cube, then moving the vertices closer to the center, so that the neck becomes smaller than the body. I extended the cube along the z-axis to make it longer, then added feet by extending certain vertices at the bottom. The process for making the arms was the same as the legs: I extended the vertices in the desired direction until it was done. I liked the block-y feel of the model, and decided to keep it mostly blocky, but it is smoothed out in some areas. For example, the vertices on the shoulders of the model were selected and set to 'smooth', making them appear curved (and less block-y). Lastly, I added an ico sphere for the tail. It was resized to be smaller and moved to the appropriate spot.

Now that the model was done, the next step was fixing the camera, lighting, and creating a floor. I used a plane to create the floor, and subdivided it by 10. I wanted the floor to have little blocks of color, since the model is a teddy bear and I wanted it to be standing on a childish rug. Using these subdivisions, I selected the faces and created a few materials of different colors. I selected faces at random, then assigned it a color. I did this for four different colors, and made the base-rug a slightly off-white color with purple hues. Then, I changed the global background to a slightly brighter blue color. Then, I adjusted the camera to the angle I wanted, moved the lighting higher up, then it was ready to render.

What I learned:

I learned a lot about Blender from this project. It reminded me of Godot in some aspects, and I'm really starting to see the patterns and terminology used in these engines. Blender is a tool I've been wanting to learn for a long time, and I was expecting it to be harder to get used to, but I think my experience with game engines in general has helped me understand how these tools normally navigate, which has boosted my ability to learn these new tools quicker. Overall, I was very happy with this project and had a lot of fun doing it.

How I expect to improve the scene:

In the near future, I expect to improve this scene by adding an 'exoskeleton' structure, so that the model can be animated. I also hope to improve it by giving it better shading and texture.

Rendered Image: