Workshop 8 - 3D Scanning

Friday 29th November

This week we were introduced to 3D imaging software Polycam. This program allows us to move around the object taking photos which are then converted server side into a 3D image as a GLTF file. From here we converted the file into an STL using free browser software and were avle to manipulate the picture within Fusion 360.

https://prod-files-secure.s3.us-west-2.amazonaws.com/6d327d71-a800-4bb7-a305-2462de459e8c/e514fbeb-da56-4c9f-a9a0-b5df40b7b4f4/20241202-0648-19.9702647.mp4

https://prod-files-secure.s3.us-west-2.amazonaws.com/6d327d71-a800-4bb7-a305-2462de459e8c/3d733690-5f76-4687-b579-a5acb4aa3ebf/20241202-0652-48.9530487.mp4

This process wasnt without issue, because the triangle count was so high it incurred long load times when trying to edit the file.

this was my process:

1. Create a construction plane beneath the object and then extruded up into the bottom of the clay exhaust.
2. Create sketch on the surface and use the spline tool to draw around the clay exhaust.
3. Create another sketch on the surface and crate a rectangle enclosing the spline lines and extrude cut downward. Attempting to extrude away everything

except the what was witihin the spline drawing led to crashes due to it interacting with so many triangles.

4. Create multiple small rectangles on new sketches to extrude away chunks of the tabletop part of the picture.
5. Use the mirror function to create an opposite exhaust for the micro mouse.
6. Use the scale tool to reduce the size so it would fit the micromouse.
7. Import into Orcaslicer and reduce the size to metric when prompted.