



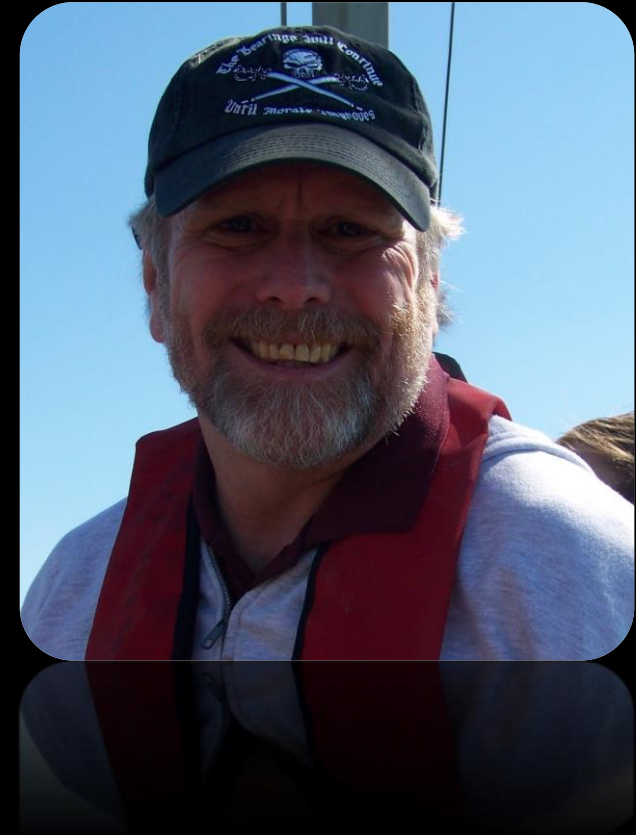
TEC-V

MILESTONE 6

By: Michael Dowling & Zealand Brennan

CLIENT

- DR. Wood
 - **Professor** | Ocean Engineering and Marine Sciences
 - **Program Chair for Ocean Engineering**



MILESTONE 6:

<i>Tasks</i>	<i>Completion%</i>	<i>Michael</i>	<i>Zealand</i>	<i>To Do</i>
Multi Fild Upload	80%	80%	0%	Testing
Styling	70%	70%	0%	Gain user Feedback
Forward Facing Sonar	30%	30%	0%	Review File Types and API
Autonomy	80%		80%	



MILESTONE TASKS

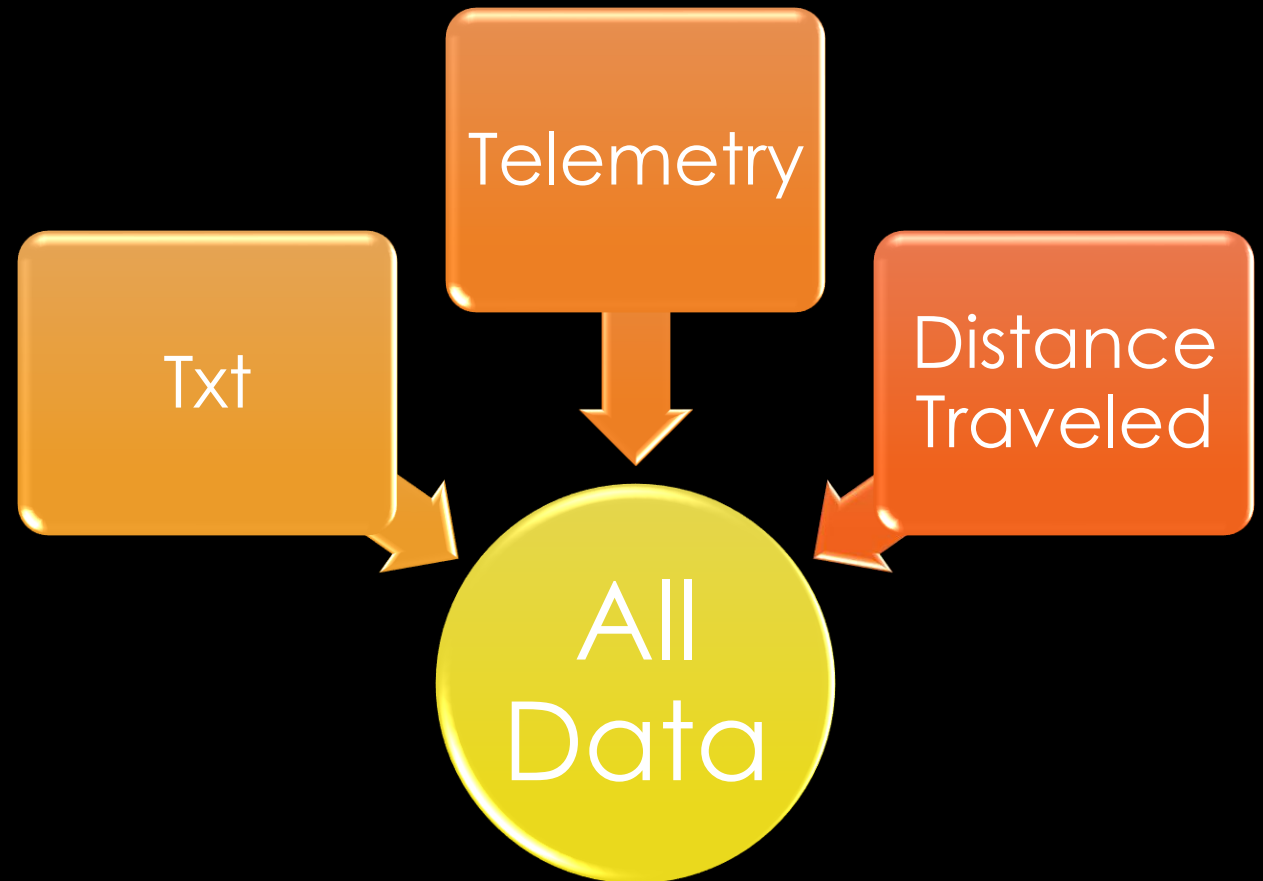


MULTI FILE UPLOAD

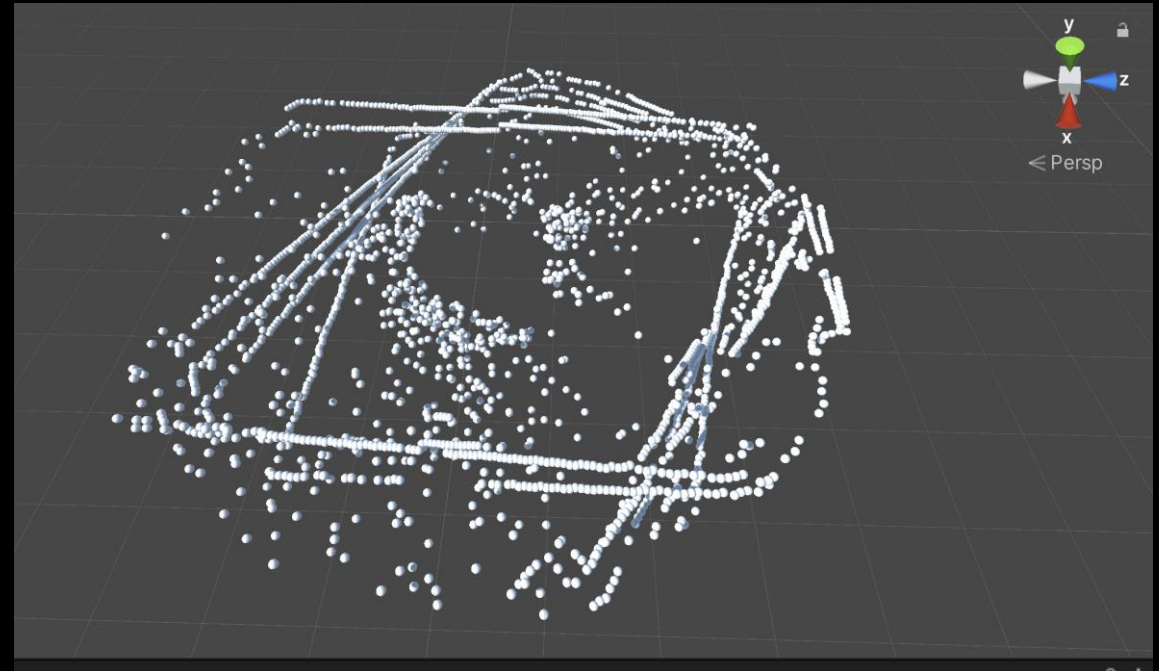
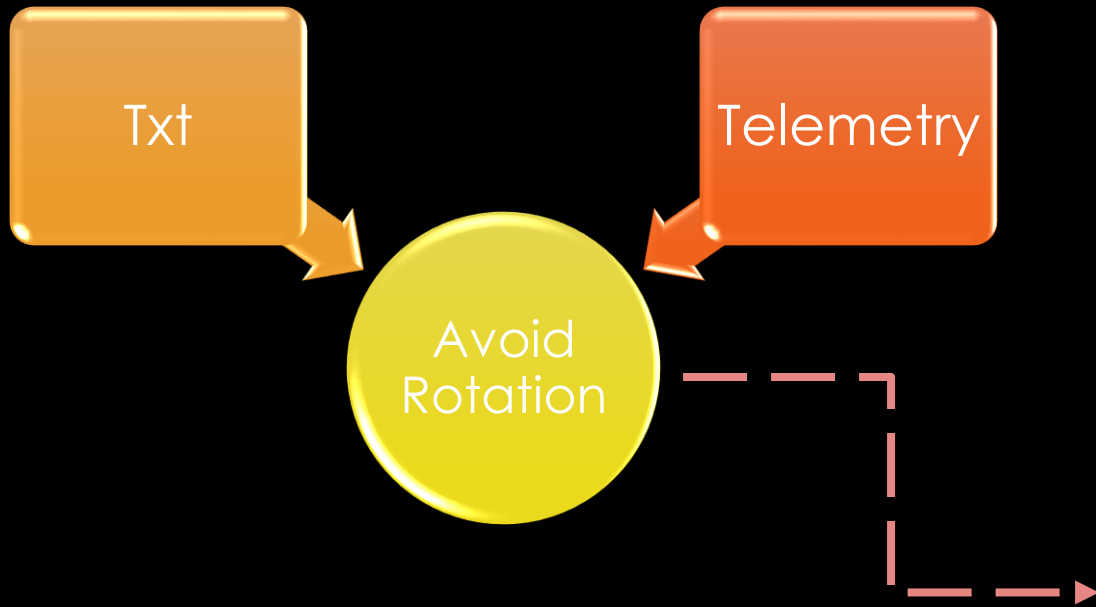
UPDATED FUNCTIONS

Load Coordinates

- Three different possible files:
 - Txt – Holds collected data from sonar
 - Telemetry- outputted by Q-Ground
 - Distance traveled – onboard IMU



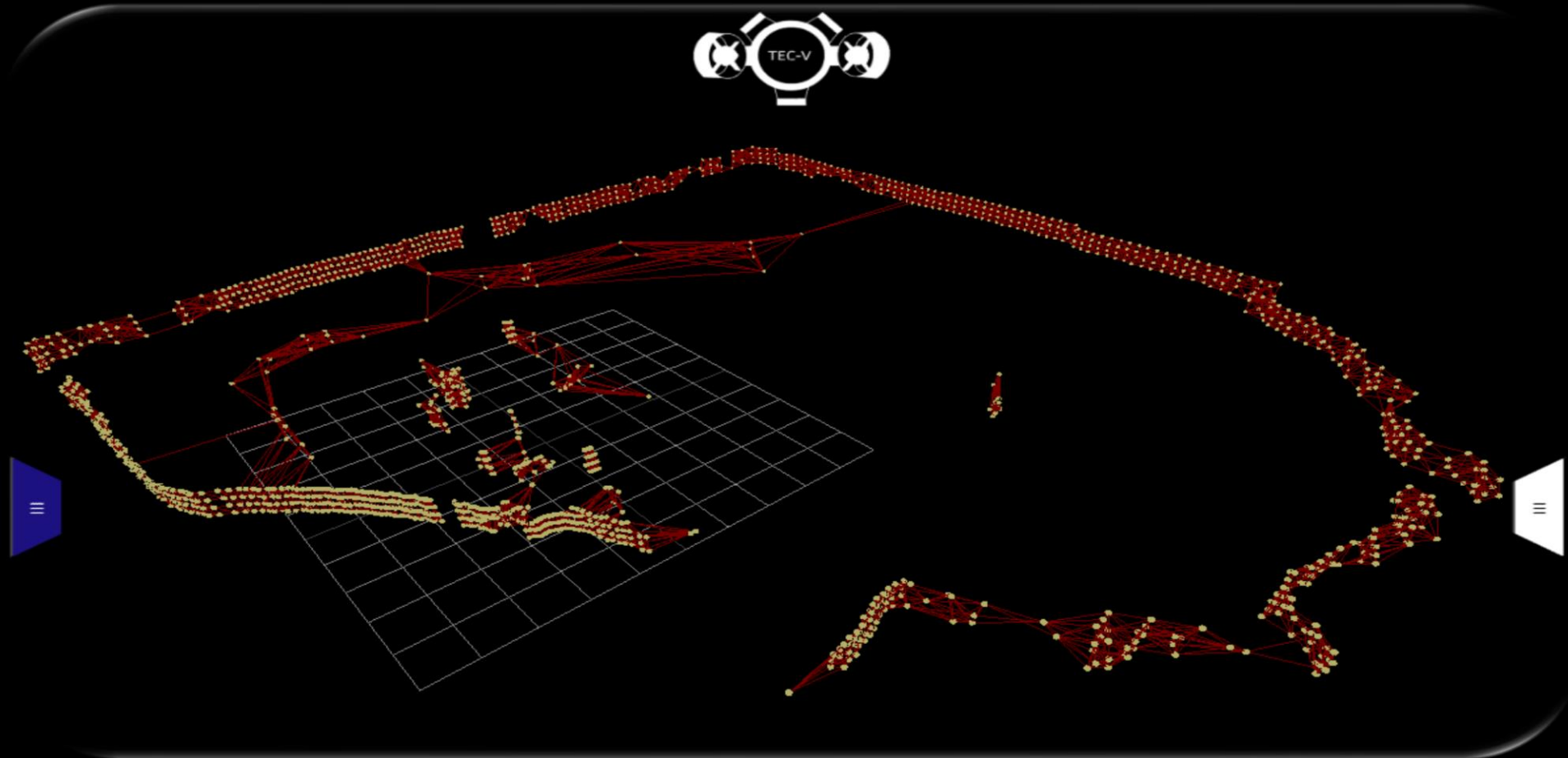
MAIN ISSUE





STYLING

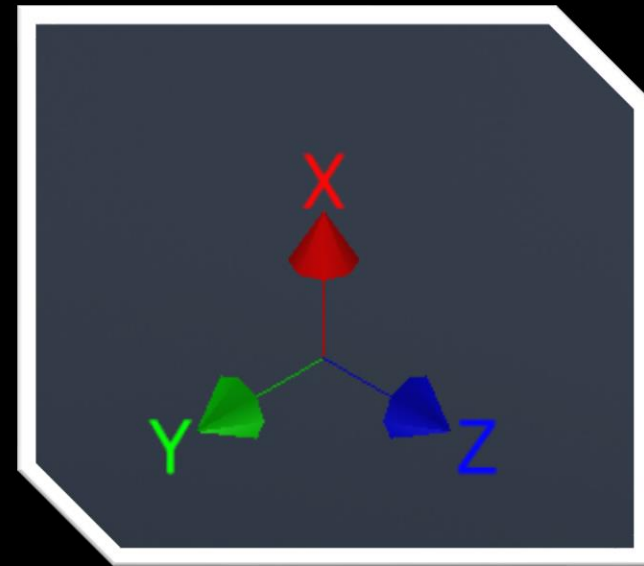
UPDATED UI



ATTEMPTED NEW FEATURES

Coordinate Layout

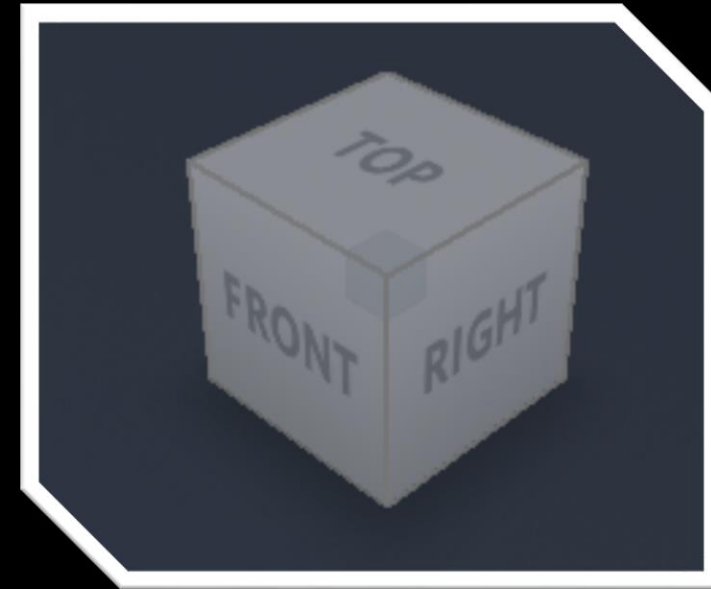
- Allow users to understand orientation of the object



PLANNED FEATURES

View Model

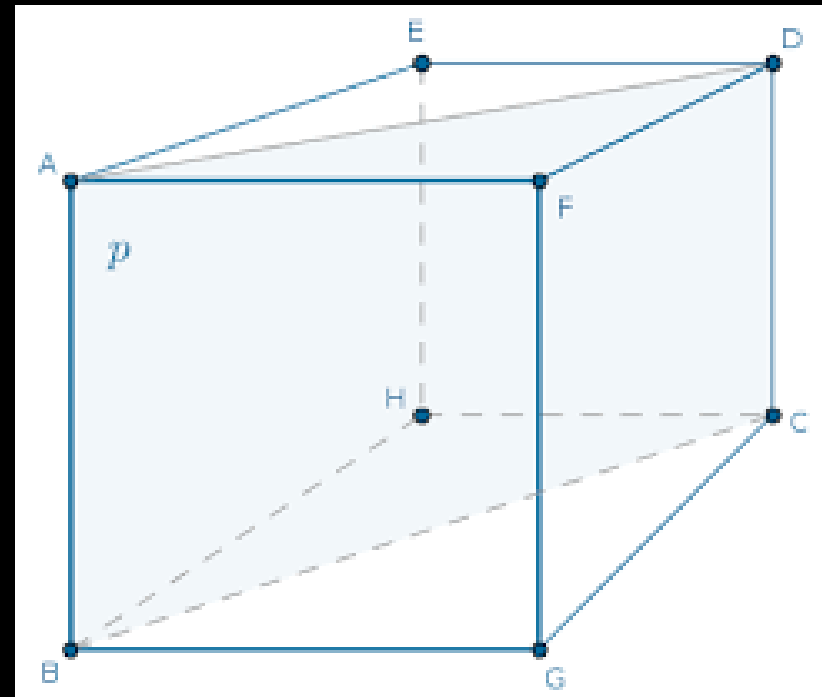
- Allow users to quickly focus on the model and choose a viewing location.



DELETE SPHERES

Create Cage

- Delete Multiple spheres: Function
 - Show cube with grid
 - Drag points to location
 - Delete: Will remove all points within zone





NEW SONAR

+ TESTING

MAIN ISSUES

Direct SSH

- Directly connect to sonar
 - Retrieve only the required Data
 - Does not work

```
Test.py > send_command
1  import socket
2  import json
3
4  IP_ADDRESS = '192.168.2.92' # Replace with your sonar's IP address
5  PORT = 51200 # Replace with your sonar's port
6
7  def send_command(command):
8      with socket.socket(socket.AF_INET, socket.SOCK_STREAM) as sock:
9          try:
10             sock.connect((IP_ADDRESS, PORT))
11             print("Connected to OmniScan 450.")
12             sock.sendall(command.encode('utf-8'))
13             print("Command sent.")
14         except Exception as e:
15             print(f"An error occurred: {e}")
16
17  if __name__ == "__main__":
18      # Example command to set start_mm to 0, adjust pulse_len_percent as
19      command = json.dumps({
20          "id": 2197,
21          "params": {
22              "start_mm": 0,
23              "pulse_len_percent": 10, # Adjust as needed
24              "filter_duration_percent": 10 # Adjust as needed
25          }
26      })
27  send_command(command)
```

TESTING DAY

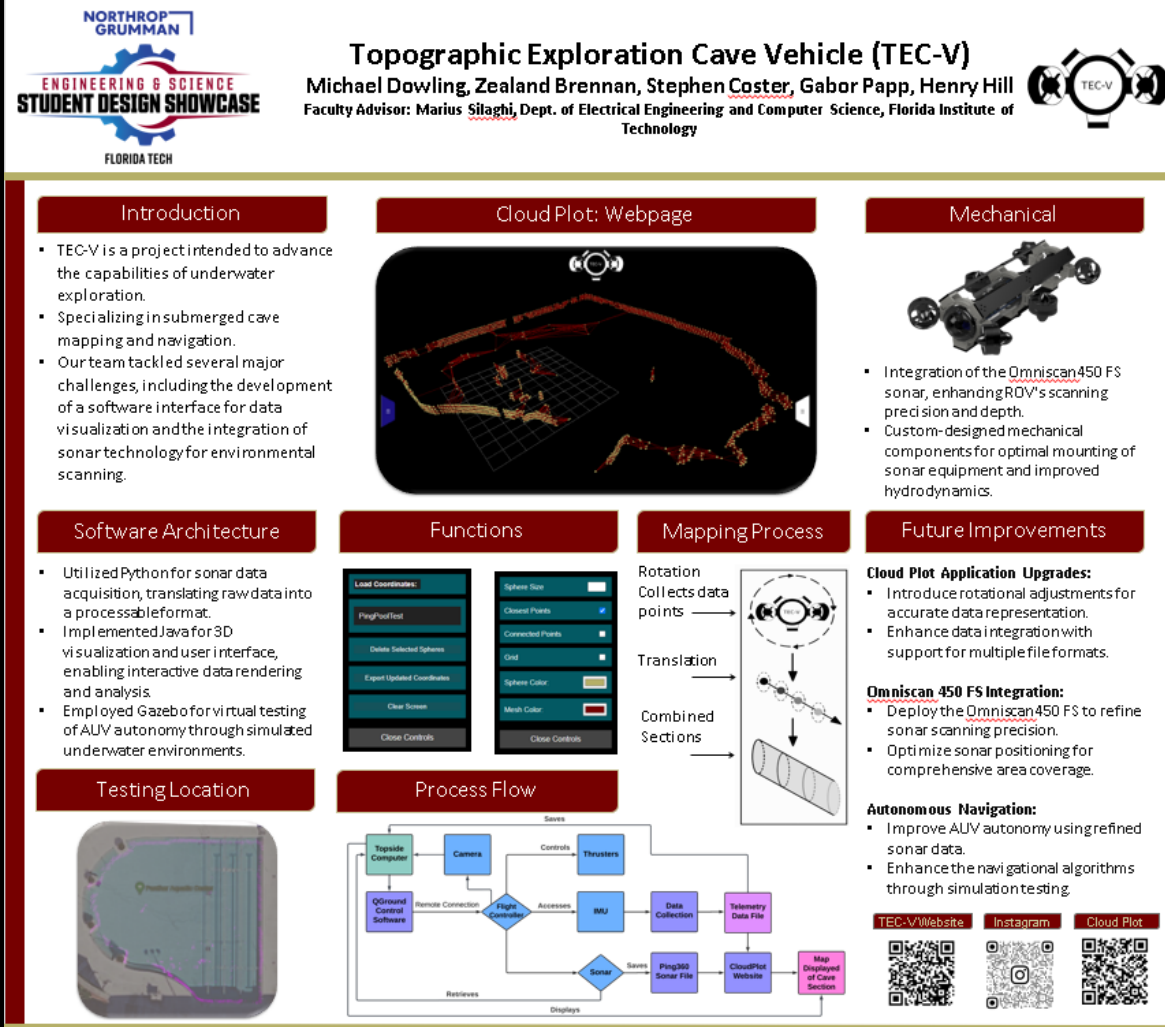
Goal Map floor of pool

- Code functioning and newly mount for sonar was placed on stern of ROV.
- Ethernet tether was broken causing network issues. No data collected

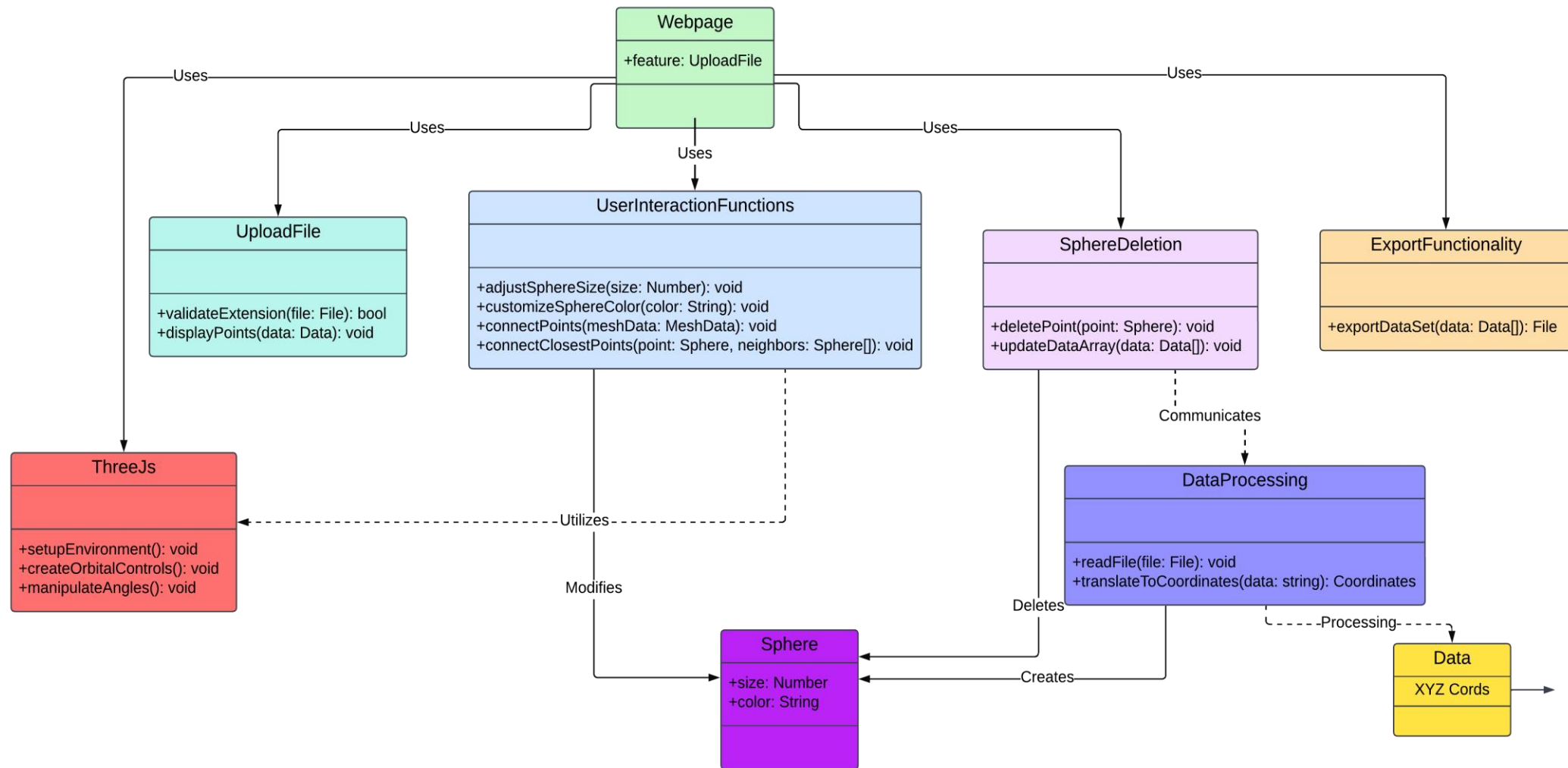


SHOWCASE

SHOWCASE POSTER



CLASS DIAGRAM: CLOUD PLOT



3D CARDS:





FUTURE WORK

IMPROVEMENTS

Cloud Plot

- Fix rotation problem with multi-file
- Allow for direct connection of craft.
- Turn the current webpage into an application.

TEC-V

- Implement new sonar
- Process data on board allowing for sensor integration for partial autonomy.

LIVE DEMO

TEC-V- Cloud Plot

https://bluecodehydra.github.io/3DCloudPlot_Webpage/

WEBPAGE LINK

TEC-V

https://bluecodehydra.github.io/FIT_Project-TEC_V/data.html

QUESTIONS?

