BACKGROUND
• DR. Wood
  • Professor | Ocean Engineering and Marine Sciences
  • Program Chair for Ocean Engineering

• Marius Silaghi
  • Professor | Electrical Engineering and Computer Science
TEC-V

➢ Topographic
➢ Exploration
➢ Cave
➢ Vehicle
CAVE MAPPING

Problem

Goal
HOW?
360 Sonar

Side Scan

SONAR
Data.csv

- Five categories
  - Depth (in progress)
  - Angle
  - Most likely distance to object
  - Telemetry
  - Time Stamp
10-21-23

- Clemente Pool 10 a.m. to 1 p.m.

- Goal:
  - Test sonar data retrieval
  - Collect Data for Cloud Plotting
  - Have a real-world test to see accuracy
PREFERRED SKILLS
PRIMARY TOOLS

• **Coding Languages:**
  • Data: Python
    • Raspberry Pi
  • Plotting: Unity / C++
    • Allows for better data manipulation in 3D environment

• **Other Skills:**
  • Web or app development
  • Data Manipulation
CURRENT TEAM
COMPUTER SCIENCE TEAM

Michael Dowling

- Rotation plotting
  - Using telemetry data to help fix cloud plots when or if a rotation/angle changes
- Working with new sonar
- False Data

Zealand Brennan

- Autonomous navigation
  - Utilizing Gazebo
EXAMPLE PROBLEM: FALSE DATA
OCEAN ENGINEERING TEAM

Spring 2024

• Mount new Side Scan Sonar
• Create an outer shell
  • Carbon Fiber
QUESTIONS?

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