MICHIGAN STATE UNIVERSITY

Beta Presentation

Ocean Carbon Pollution Cleanup

The Capstone Experience

Team Anthropocene Institute

Henry Bock
William Chasteen
Faith Dawson
Cam Koons
Nitin Polavarapu
Blake Potvin

Department of Computer Science and Engineering
Michigan State University

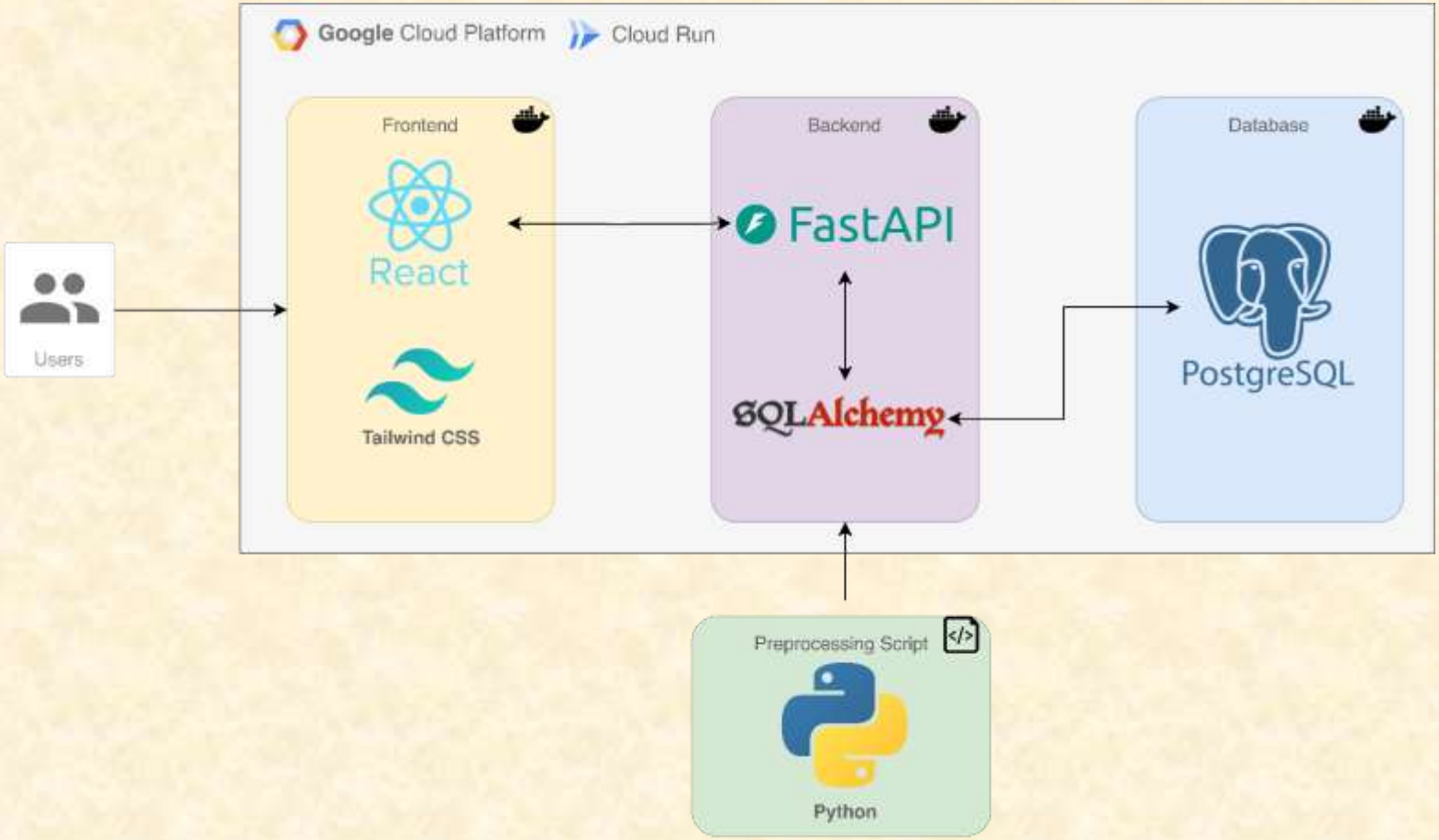
Fall 2024

From Students…
…to Professionals

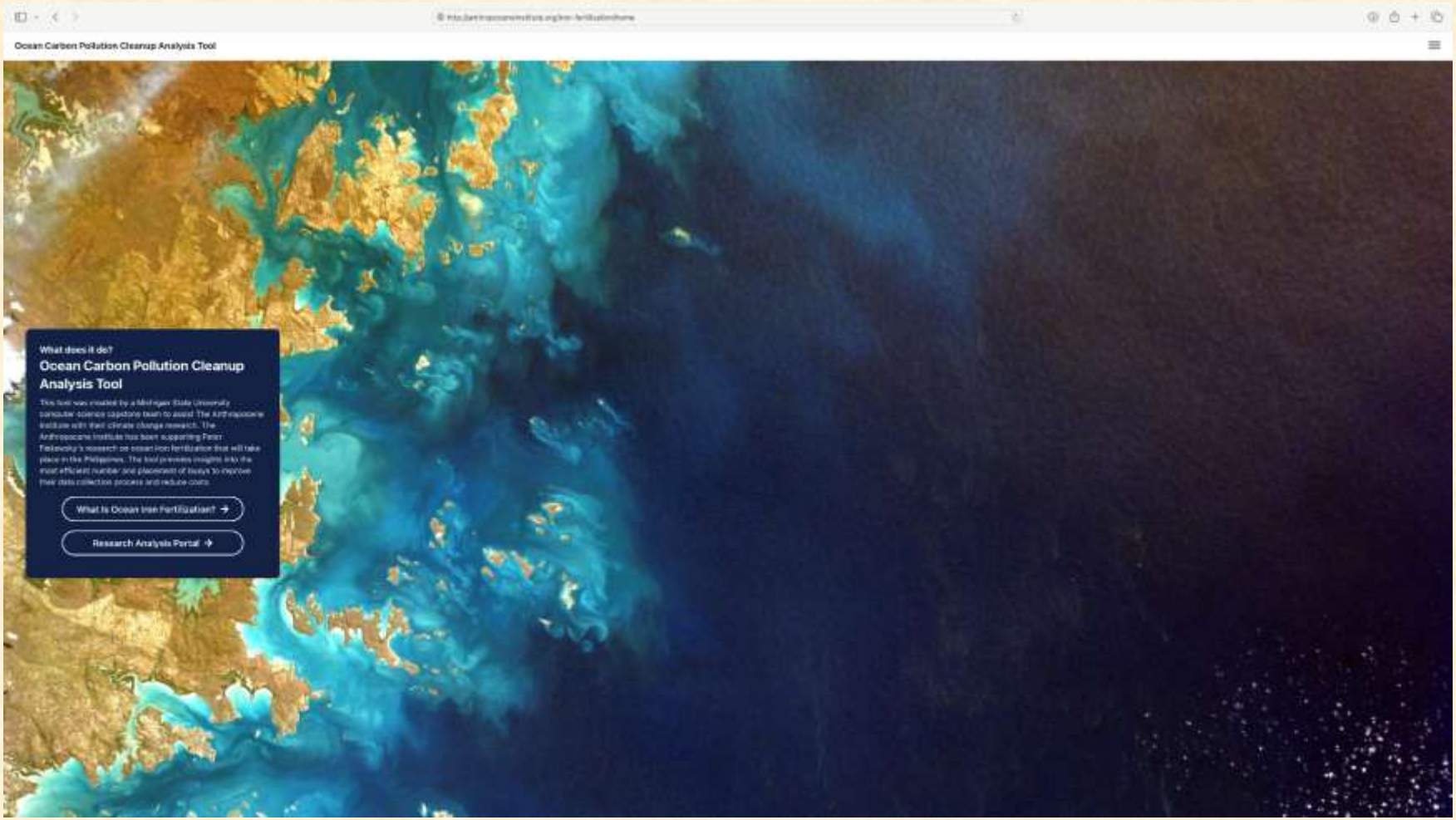
Project Overview

- Analyze ocean sensor network configurations for an iron fertilization experiment
- By modeling various proposed buoy layouts and comparing how effective data collection will be
- Create visualizations and graphs of the prospective outcomes to convey potential experimental results

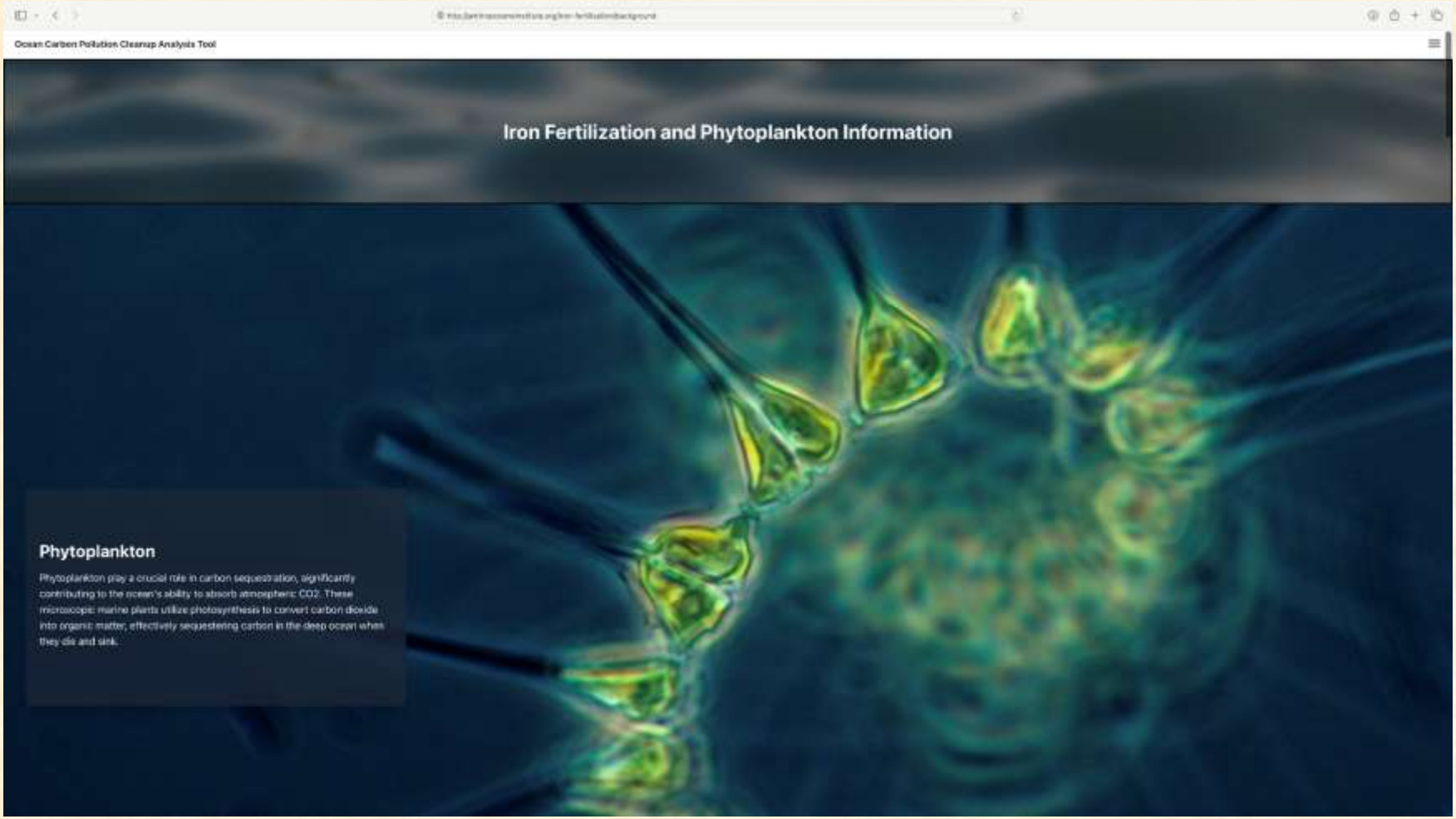
System Architecture



Home


Ocean Carbon Pollution Cleanup Analysis Tool
What does it do?
Ocean Carbon Pollution Cleanup Analysis Tool
What is Ocean Iron Fertilization?
Research Analysis Portal

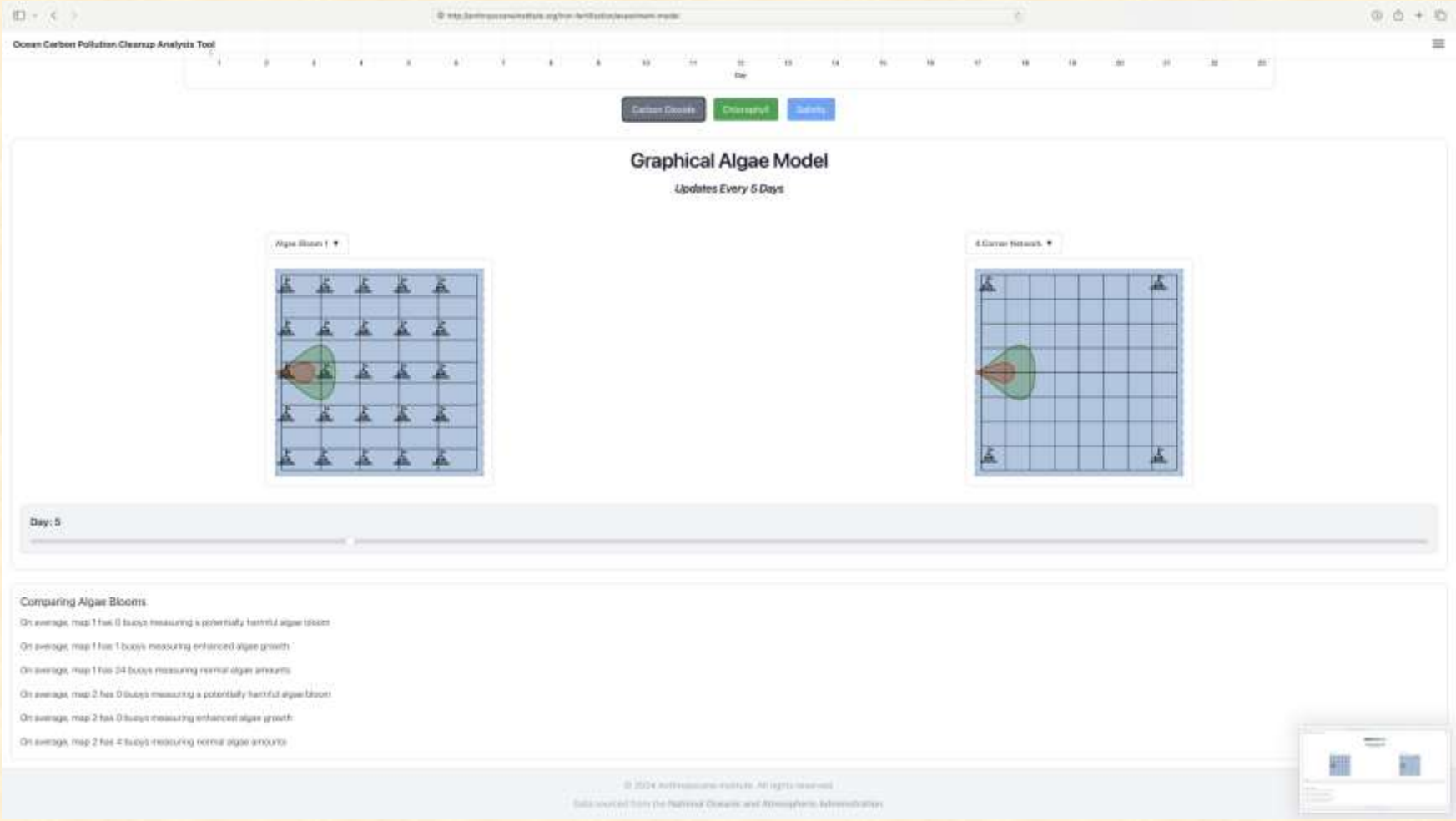
Background


Ocean Carbon Pollution Cleanup Analysis Tool
Iron Fertilization and Phytoplankton Information
Phytoplankton
Phytoplankton play a crucial role in carbon sequestration, significantly contributing to the ocean's ability to absorb atmospheric CO2. These microscopic marine plants utilize photosynthesis to convert carbon dioxide into organic matter, effectively sequestering carbon in the deep ocean when they die and sink.

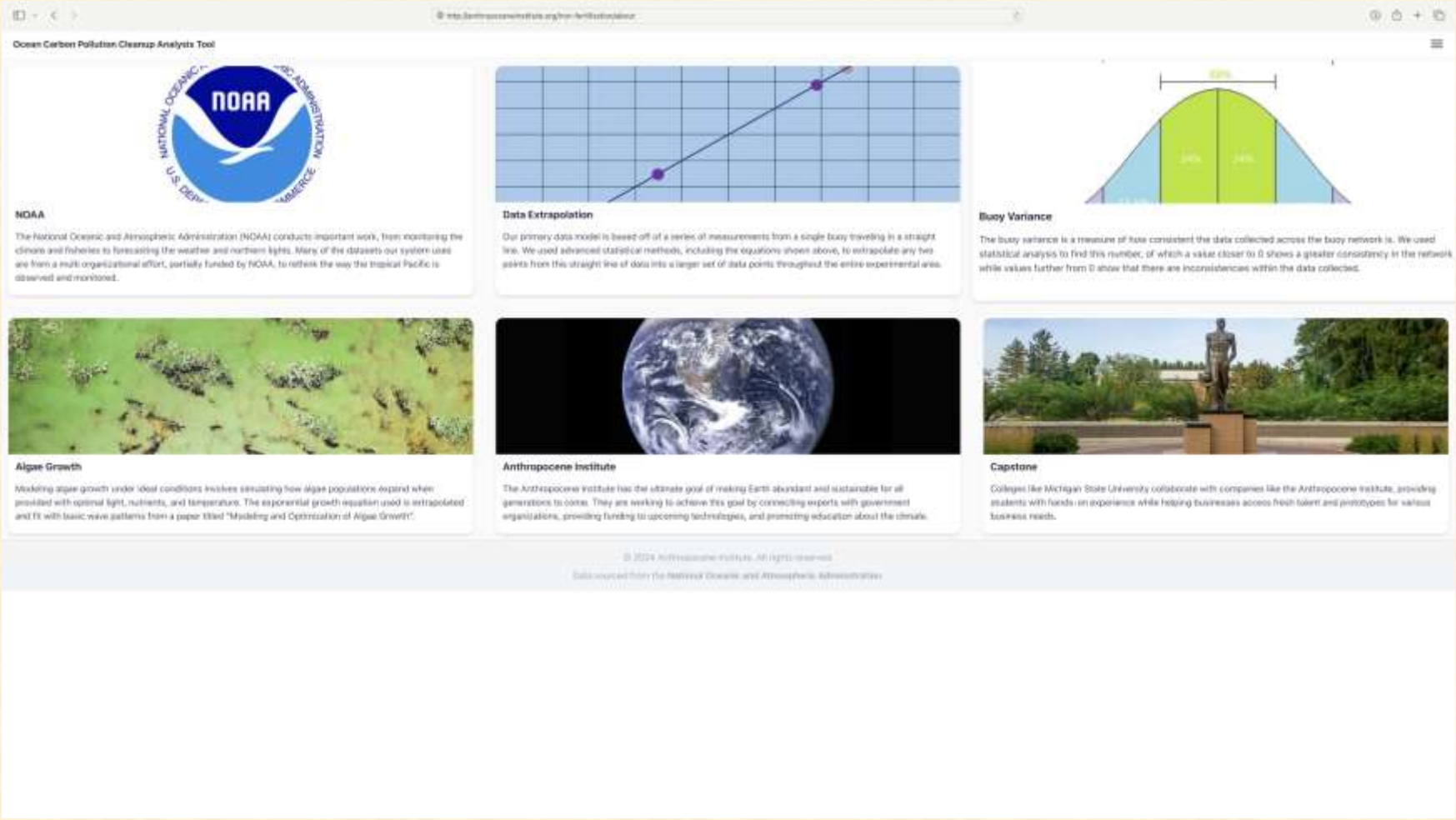
Collecting Data

Experiment Model

Experiment Model 2



About


Ocean Carbon Pollution Cleanup Analysis Tool
NOAA
NOAA
Data Extrapolation
Buoy Variance
Algae Growth
Anthropocene Institute
Capstone

What's left to do?

- Features
- Stretch Goals
  - Daily Algae Graphical Updates
- Other Tasks
  - Citation Linking
  - Client Textual Updates on Background Page
  - Tooltip Bug Fix
  - Buoy Cost Change
  - Experimental Model Page Context
  - Dark Mode Bug Fix
  - Web Deployment

Questions?