Beta Presentation
Machine Learning for Optimization of Carbon Removal

The Capstone Experience
Team Anthropocene Institute

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Project Overview

- Carbon removal is crucial for mitigating climate change.
- An interactive web app displaying heatmaps to show the best location to implement carbon removal techniques.
- Helps investors, government agencies, etc.
System Architecture

Database

[PostgreSQL]

Cluster

Google Kubernetes Engine

Node

[kubernetes]

Container

[docker]

Backend

Flask

[TensorFlow]

[python]

Frontend

React

[CSS]

[HTML]

Node

[kubernetes]

Container

[docker]
Climate Solutions - Optimized

We provide companies and agencies with the artificial intelligence tools necessary for completing their sustainability projects in the most efficient way possible.

Optimization Tools
DAC Map
About Page

About Us

We are a group of Michigan State Students and made this website for our capstone project...

Our Team

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Articles Page
What’s left to do?

• Features
  ▪ Feature Complete!

• Stretch Goals
  ▪ Reduce map loading time.

• Other Tasks
  ▪ Refine UI based on feedback
  ▪ Review text on all pages.
Questions?
How do we get the final class + ML model?

• Sort each feature, divide into quantiles, assign each quantile a label.

• Row wise average, percentile rank for efficiency and categorize into classes 1-7.

• Train SVC model on the features to predict the final class. (linear kernel)

• Predicts final class with accuracy of 92% - 98% for the 3 techniques.