

**MICHIGAN STATE**  

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**UNIVERSITY**

# Beta Presentation

## Health Outcomes Forecasting Tool

### The Capstone Experience

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*From Students...  
...to Professionals*

# Project Overview

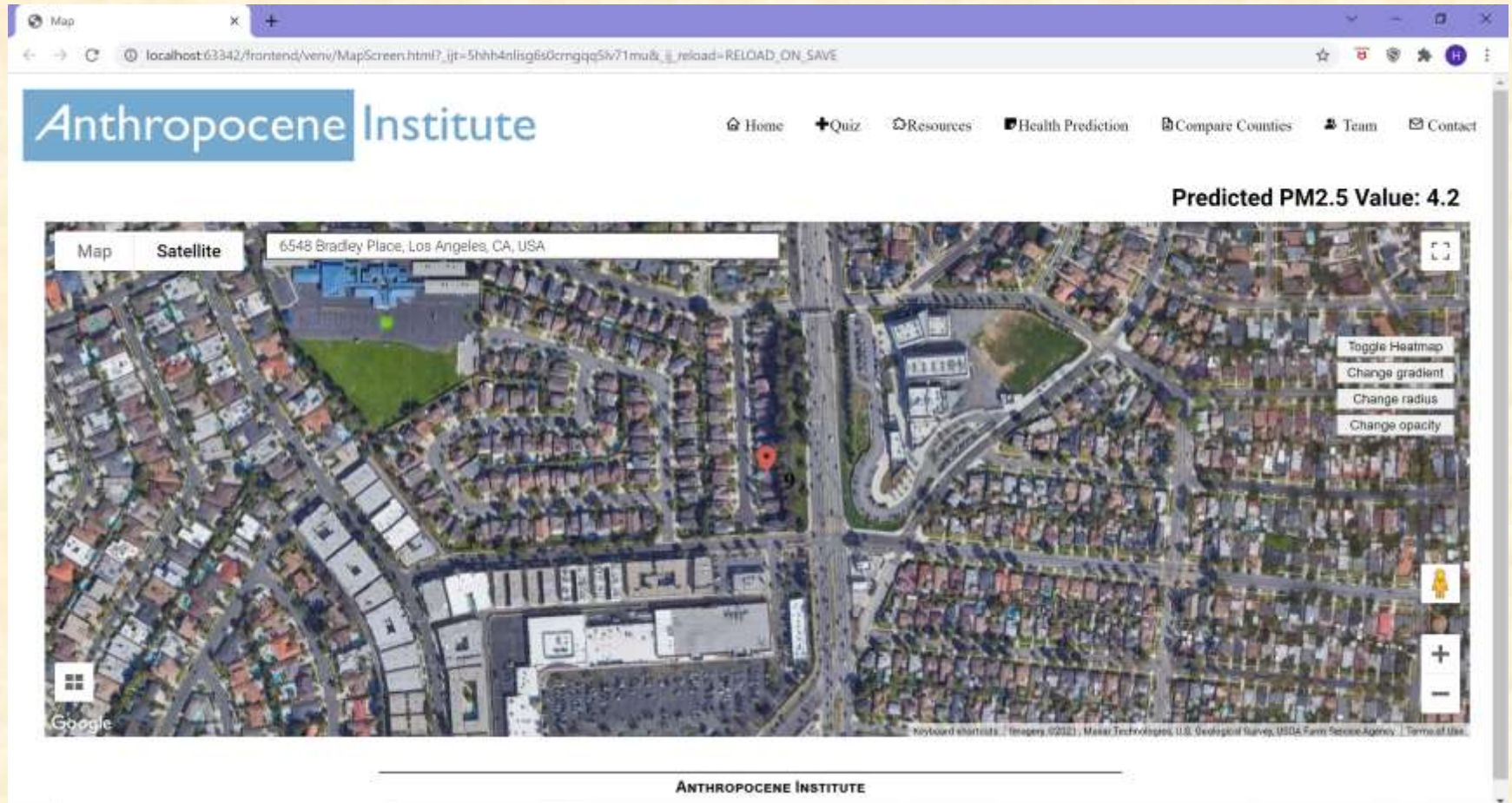
- There is a lack of precise data about air pollution and health effects on the individual.
- Poor air quality can result in an increase in lung disease and other health complications.
- Keep consumers, researchers, and politicians informed about air quality in their area
- Designing a web app that uses machine learning to predict air quality and health information in each area, and displays that with a map overlay



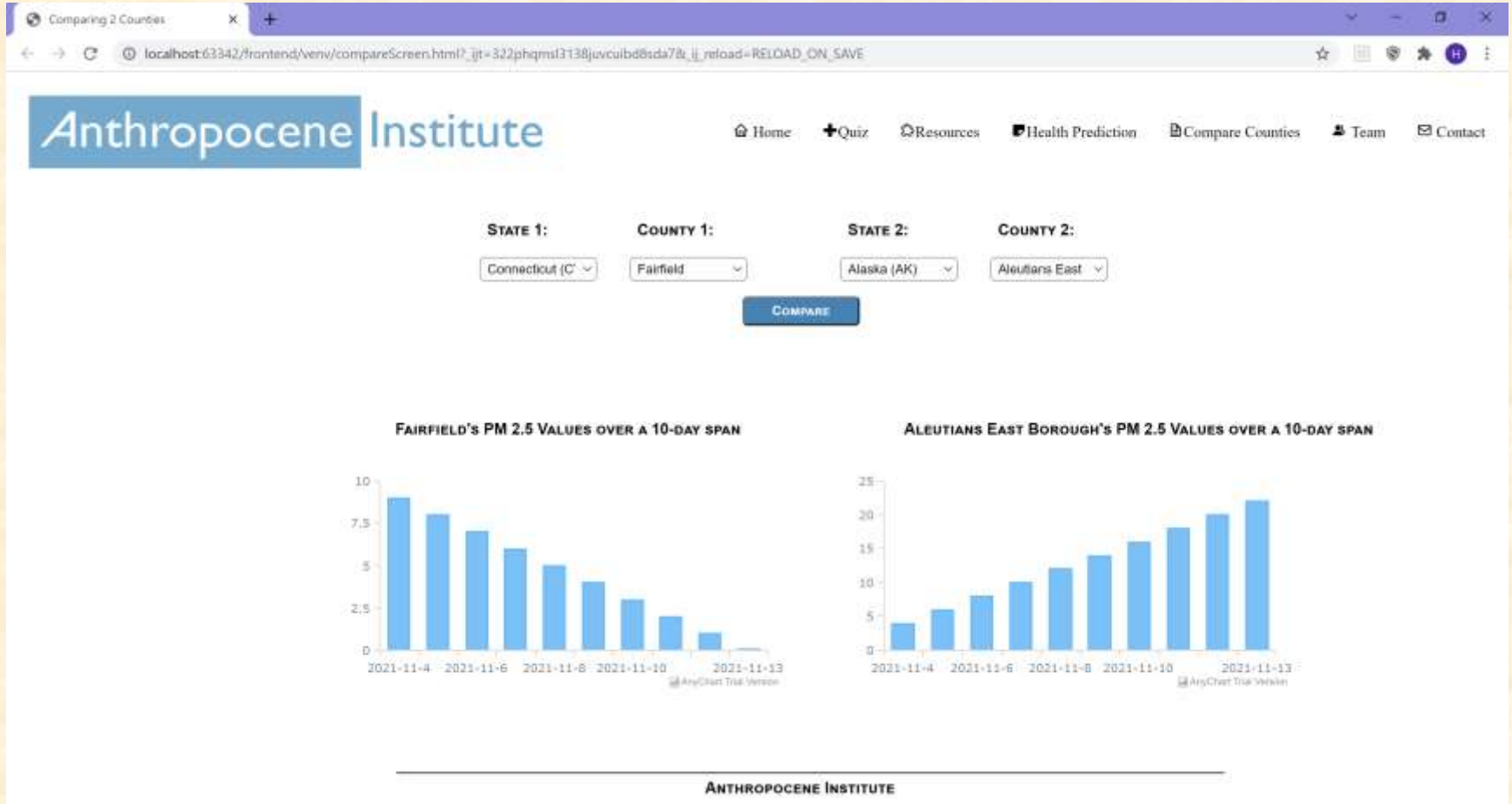
# System Architecture



# Map Page



# Compare Page



# Health Predictions Page

The screenshot shows a web browser window with the URL `localhost:63342/frontend/venv/HealthPrediction.html`. The page header features the Anthropocene Institute logo and navigation links: Home, Quiz, Resources, Health Prediction, Compare Counties, Team, and Contact.

The main content area contains a form with two dropdown menus: "Select State:" (set to Delaware (DE)) and "Select County:" (set to Kent). Below the form is a button labeled "Generate Health Predictions".

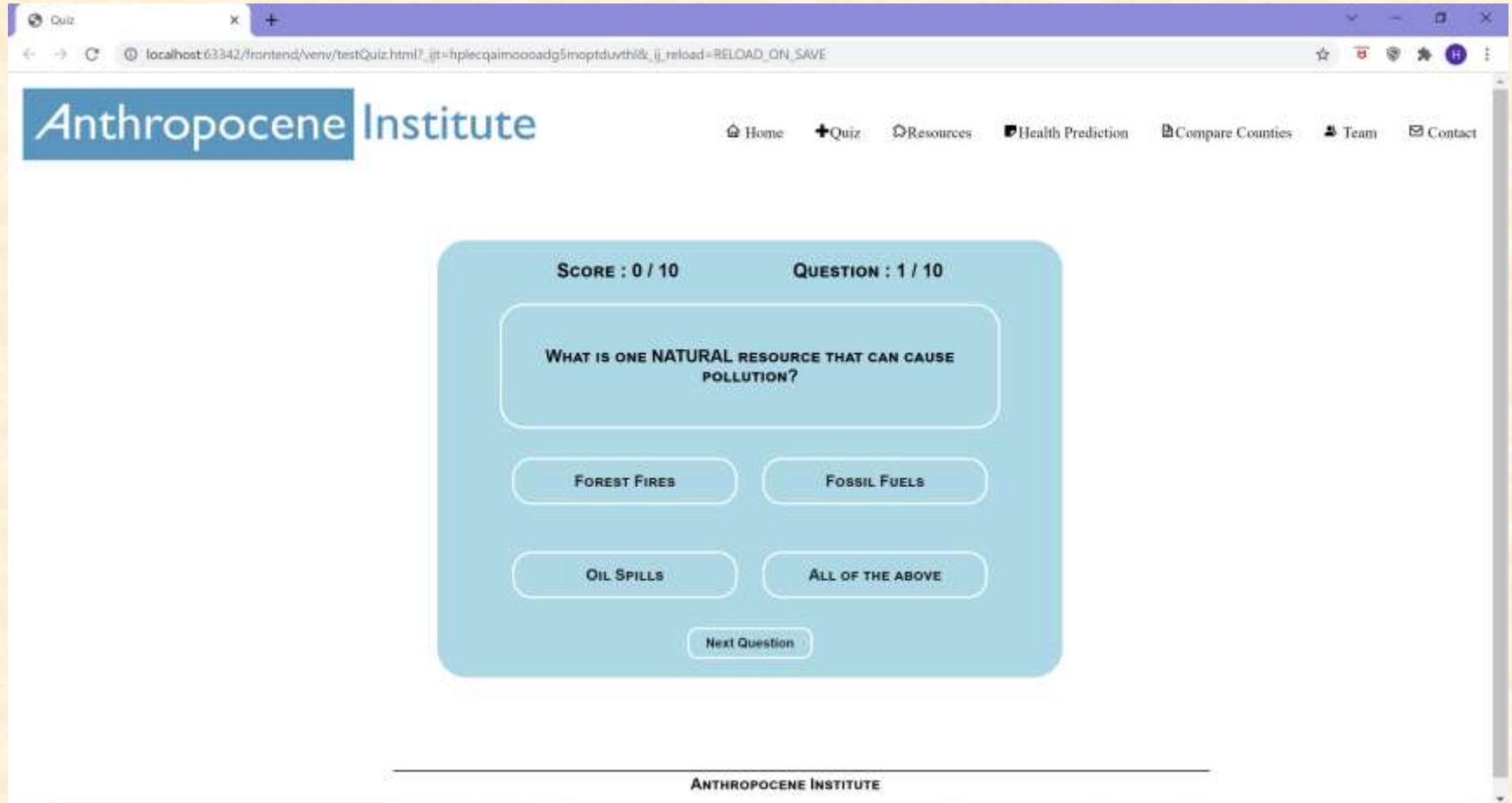
Below the form, the text "Predicted Health Effects based on Kent's PM2.5 levels" is displayed above a table. The table has four columns: Health Effects, Predicted Rates, Above or Below State Average, and Above or Below Country Average. It contains three rows of data.

Health Effects	Predicted Rates	Above or Below State Average	Above or Below Country Average
Infant Mortality	6.35 deaths per 1,000 births	Slightly Below Average	Slightly Above Average
Respiratory-related Death Rate	86.20 deaths per 1,000 people	Slightly Below Average	Below Average
Life Expectancy	76.80 years	Slightly Below Average	Slightly Below Average

At the bottom of the page, the text "ANTHROPOCENE INSTITUTE" is centered.



# Quiz Page



# What's left to do?

- Features
- Stretch Goals
  - Predict pm2.5 with historical data at a specific coordinate
  - Predict pm2.5 with more than the four nearest sensors
  - Provide additional overlay for major pollution sources
  - Predict 5 total health parameters
- Other Tasks
  - Ensure project is fully documented and ready to hand off
  - Final meeting with AI design team
  - Meet with software team to discuss server security





# Questions?

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