MICHIGAN STATE UNIVERSITY

Alpha Presentation

Wildfire Risks Forecasting Tool

The Capstone Experience

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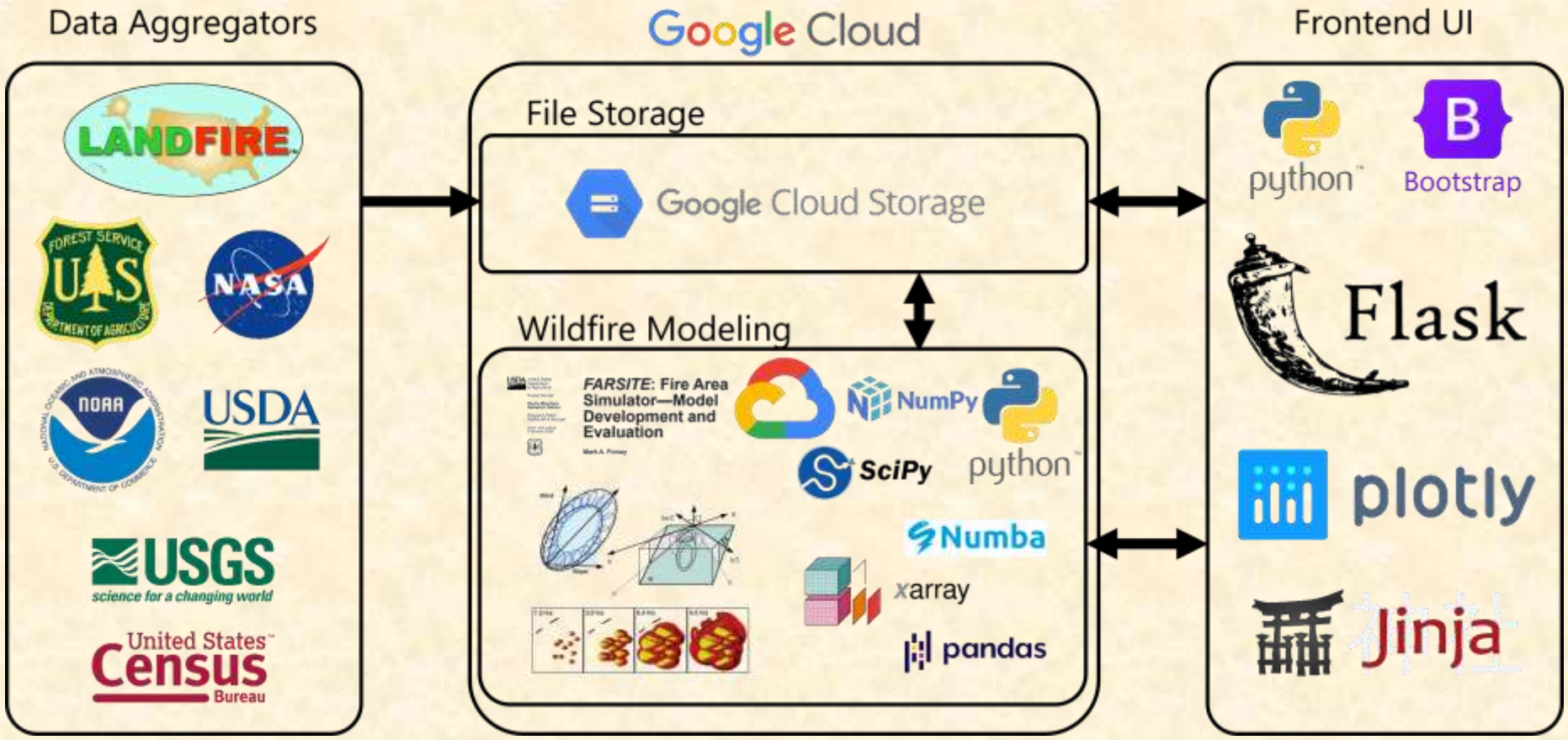
From Students…
…to Professionals

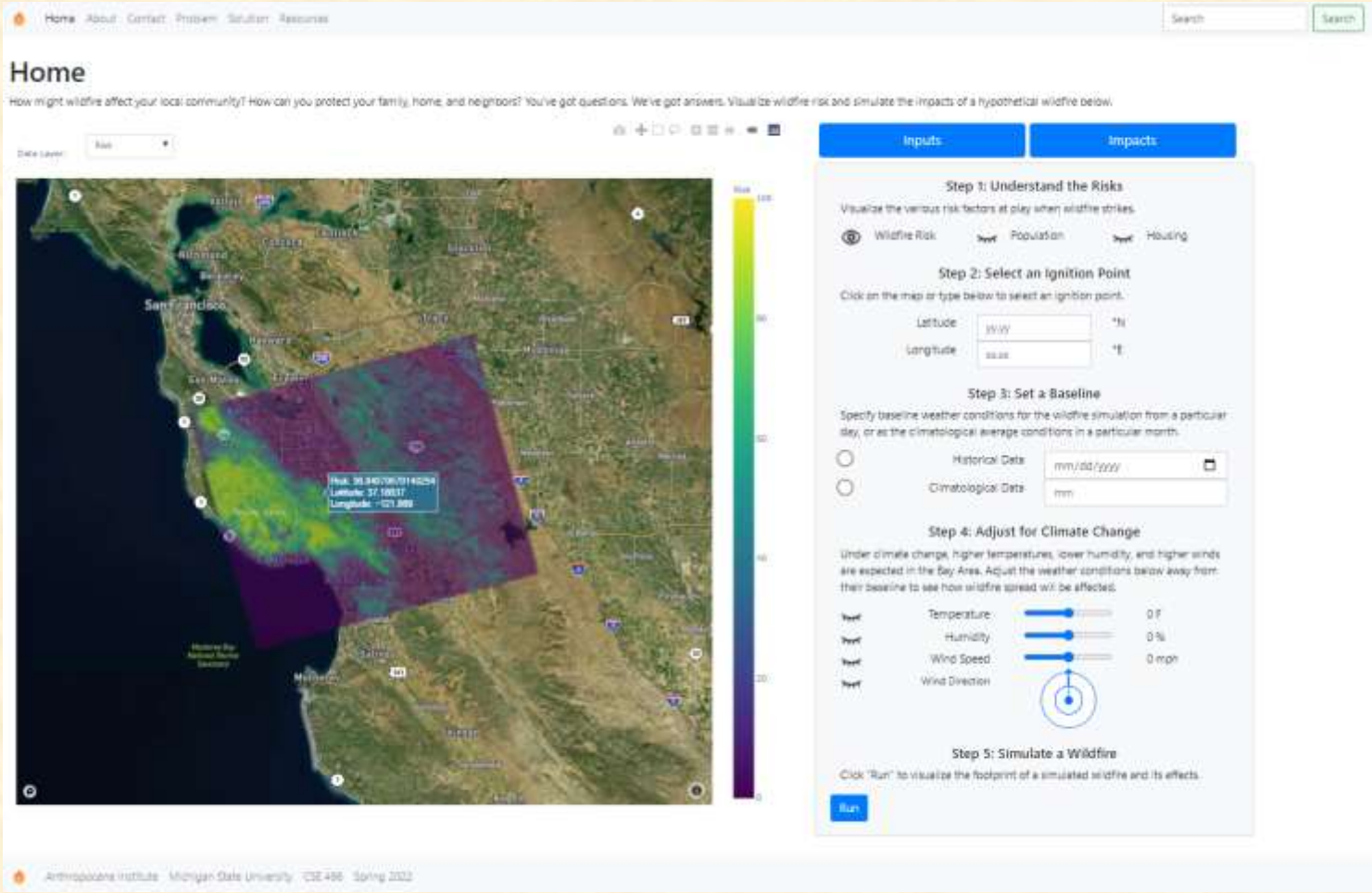
Project Overview

- Wildfires in San Francisco's Bay Area threaten lives, property and the environment
- Public understanding of wildfire risk lags wildfire & climate science
- We have created an intuitive web app to simulate wildfires and predict their impacts
  - Accessible from any internet-connected computer, phone, or tablet
  - Modern, minimalist, intuitive

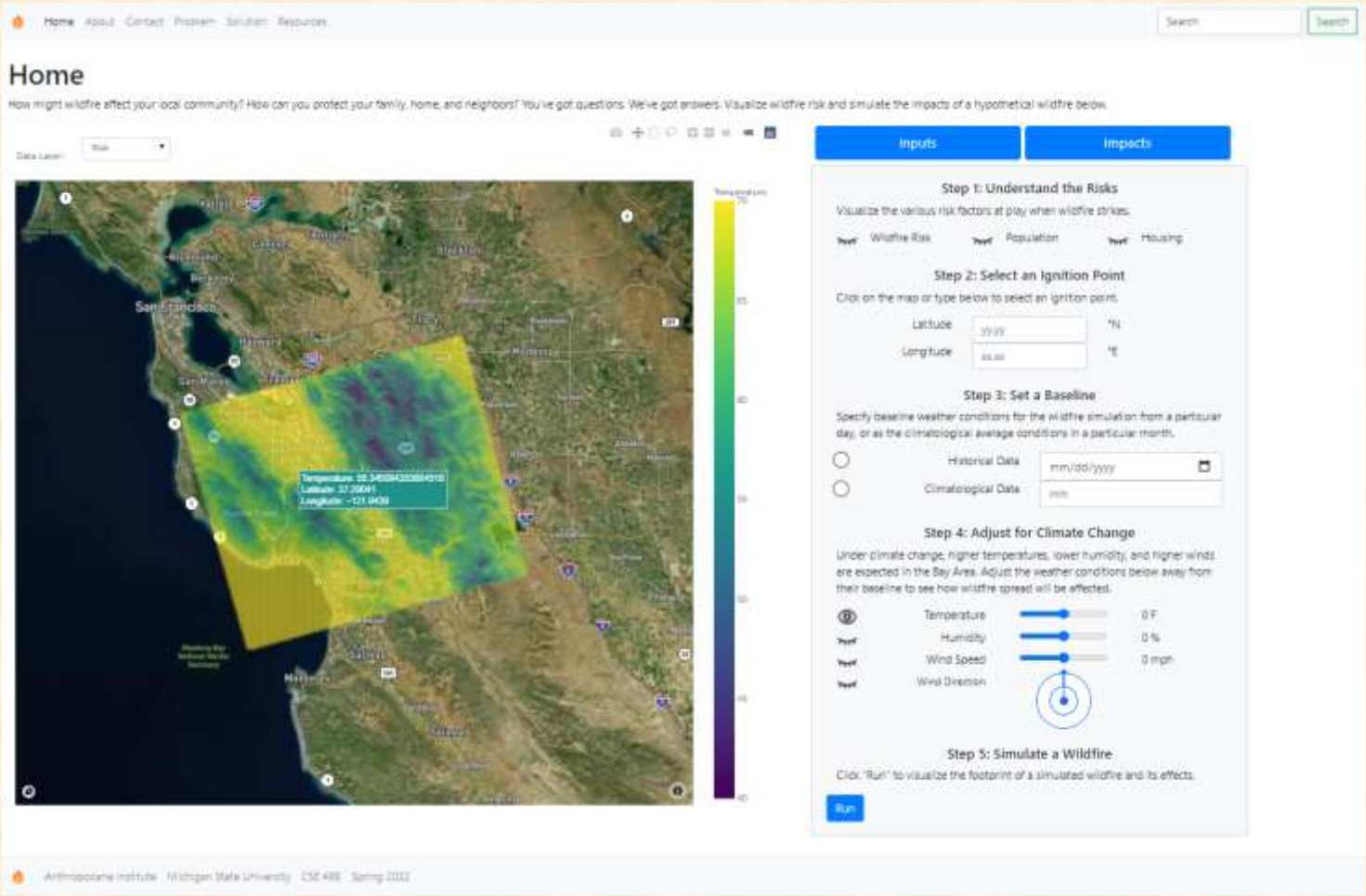
System Architecture



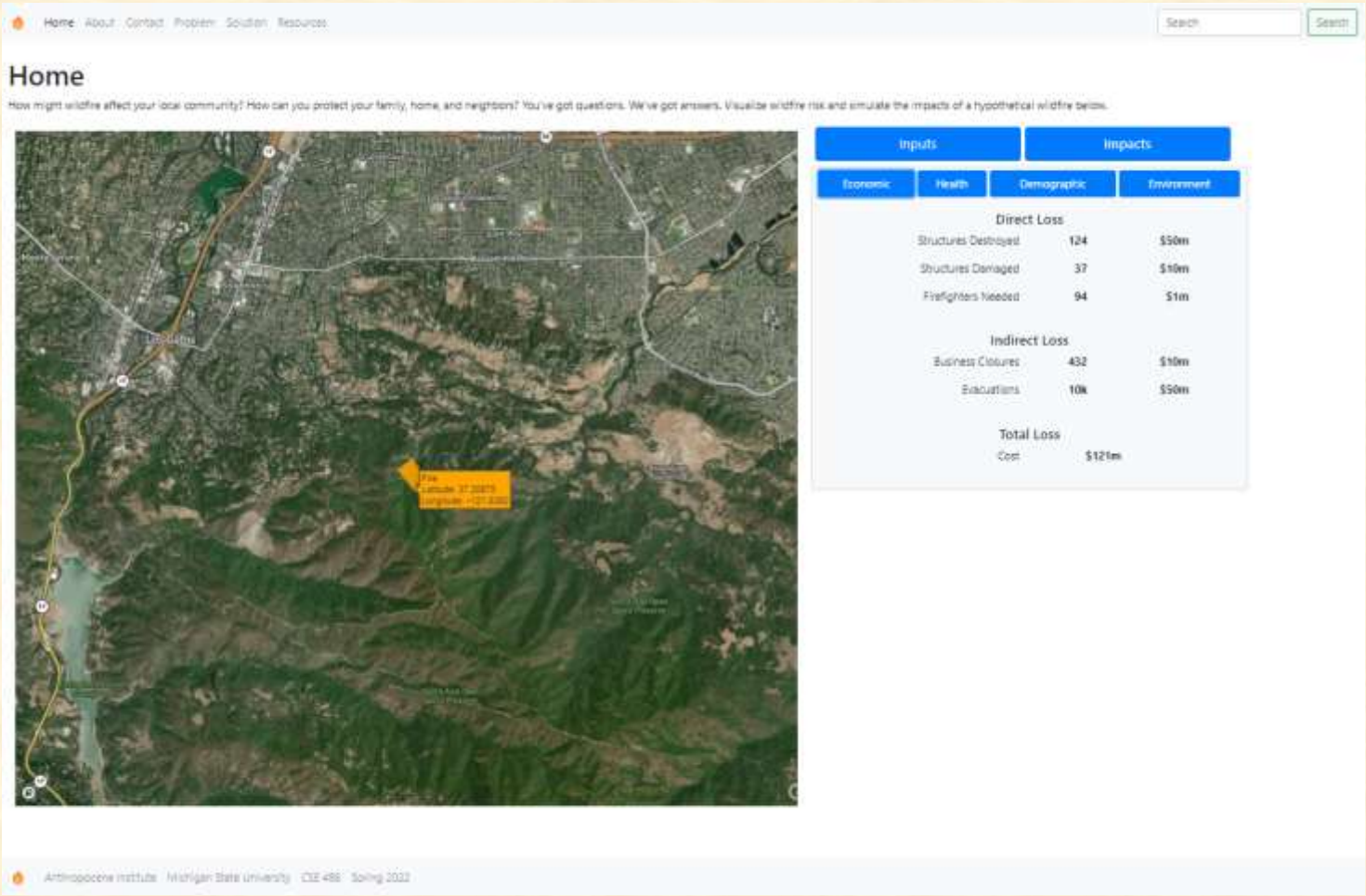
Screenshot: Input > Risk Layer



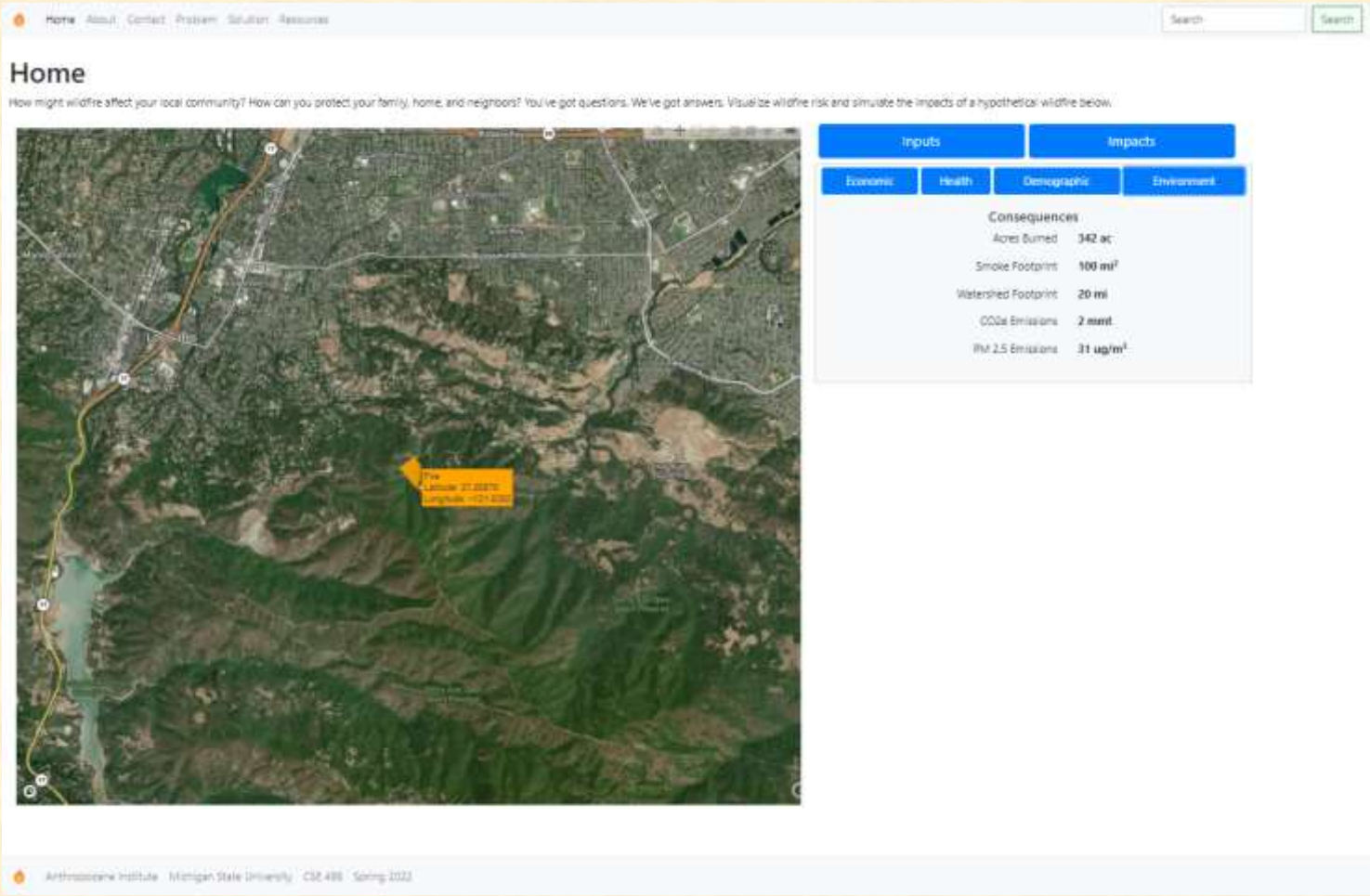
Screenshot: Input > Temperature Layer



Screenshot: Output > Economic Impact



Screenshot: Output > Environmental Impact



What's left to do?

- Include historical weather data and climate normals from NOAA
- Compute relevant economic, environment, and health impacts from existing data layers
- Integrate canopy spread, spotting, and fire acceleration in our model. Optimize computation time to create seamless user experience
- Update webpage design and continue to integrate frontend with backend
- Transition hosting to Anthropocene Institute Google Cloud resources

Questions?