MICHIGAN STATE UNIVERSITY

Beta Presentation

Wildfire Risks Forecasting Tool

The Capstone Experience

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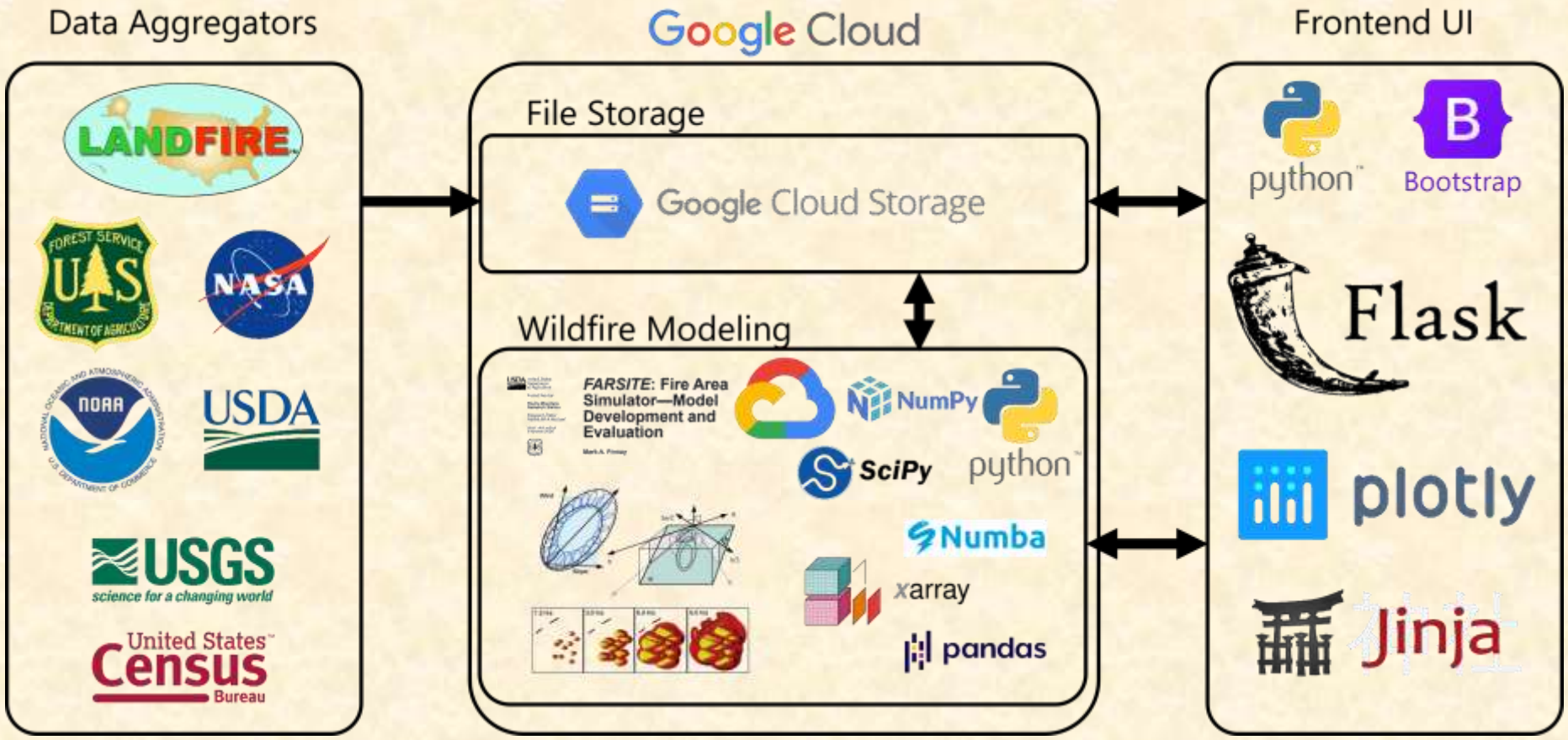
Spring 2022

From Students…
…to Professionals

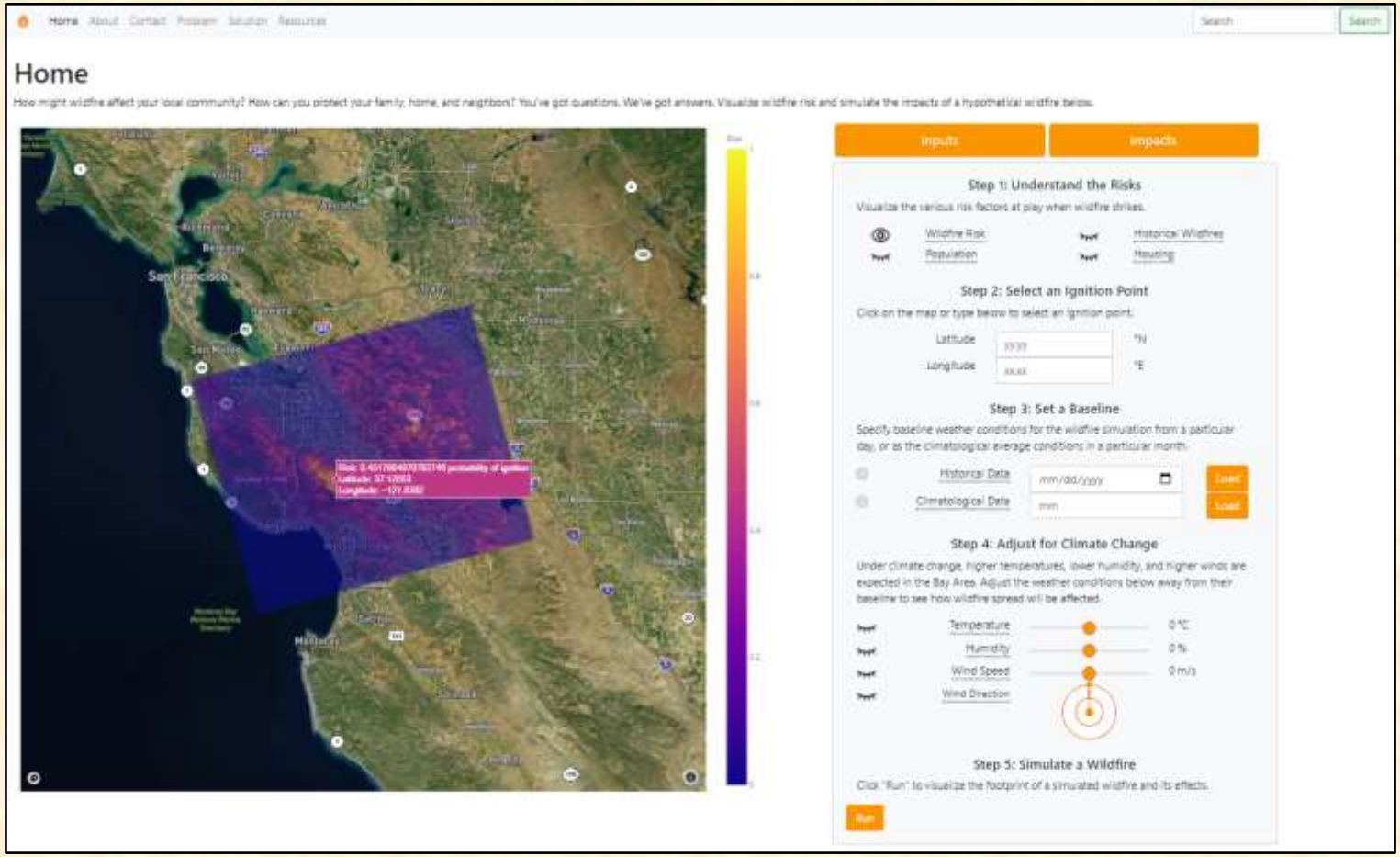
Project Overview

- 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

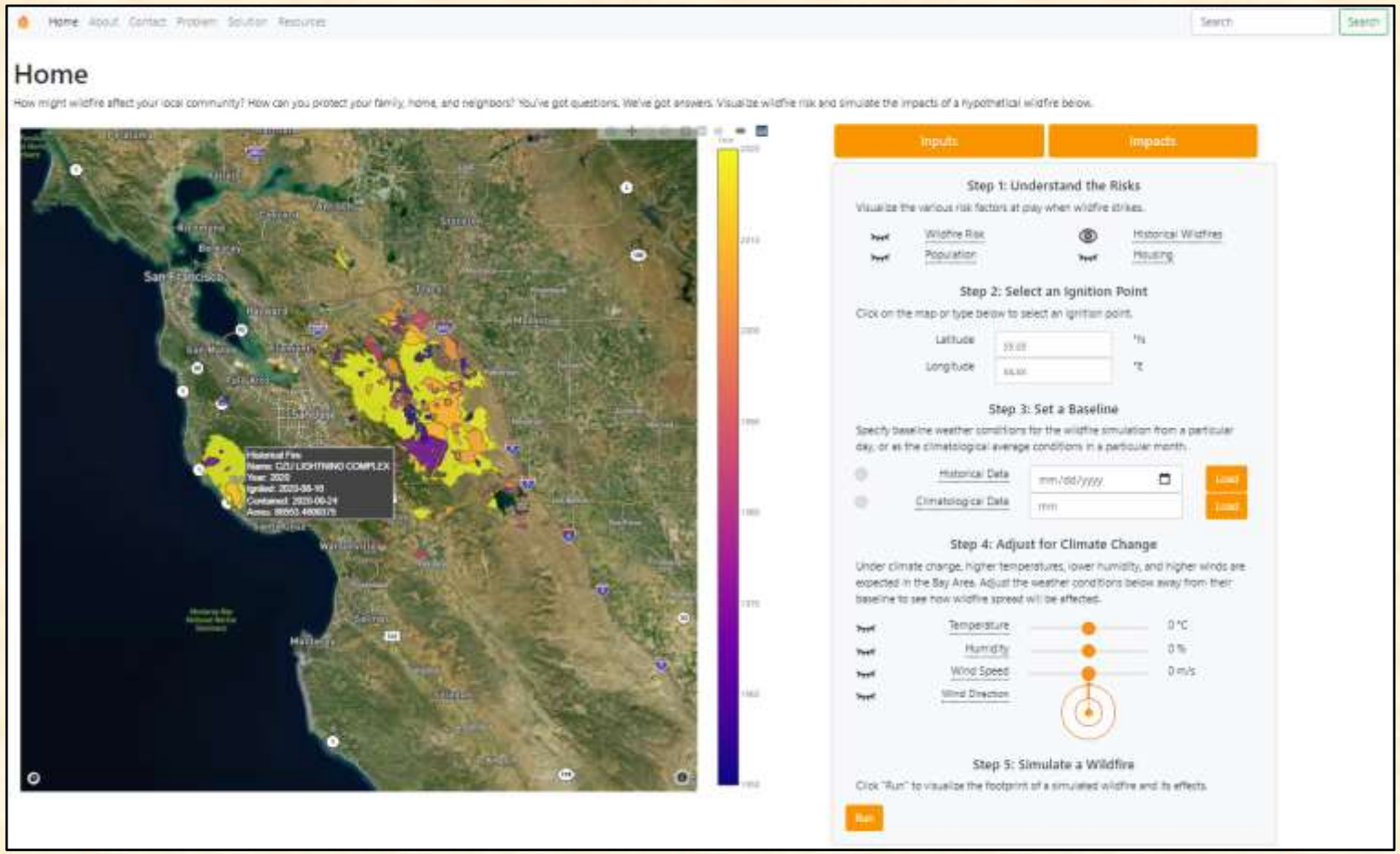
System Architecture



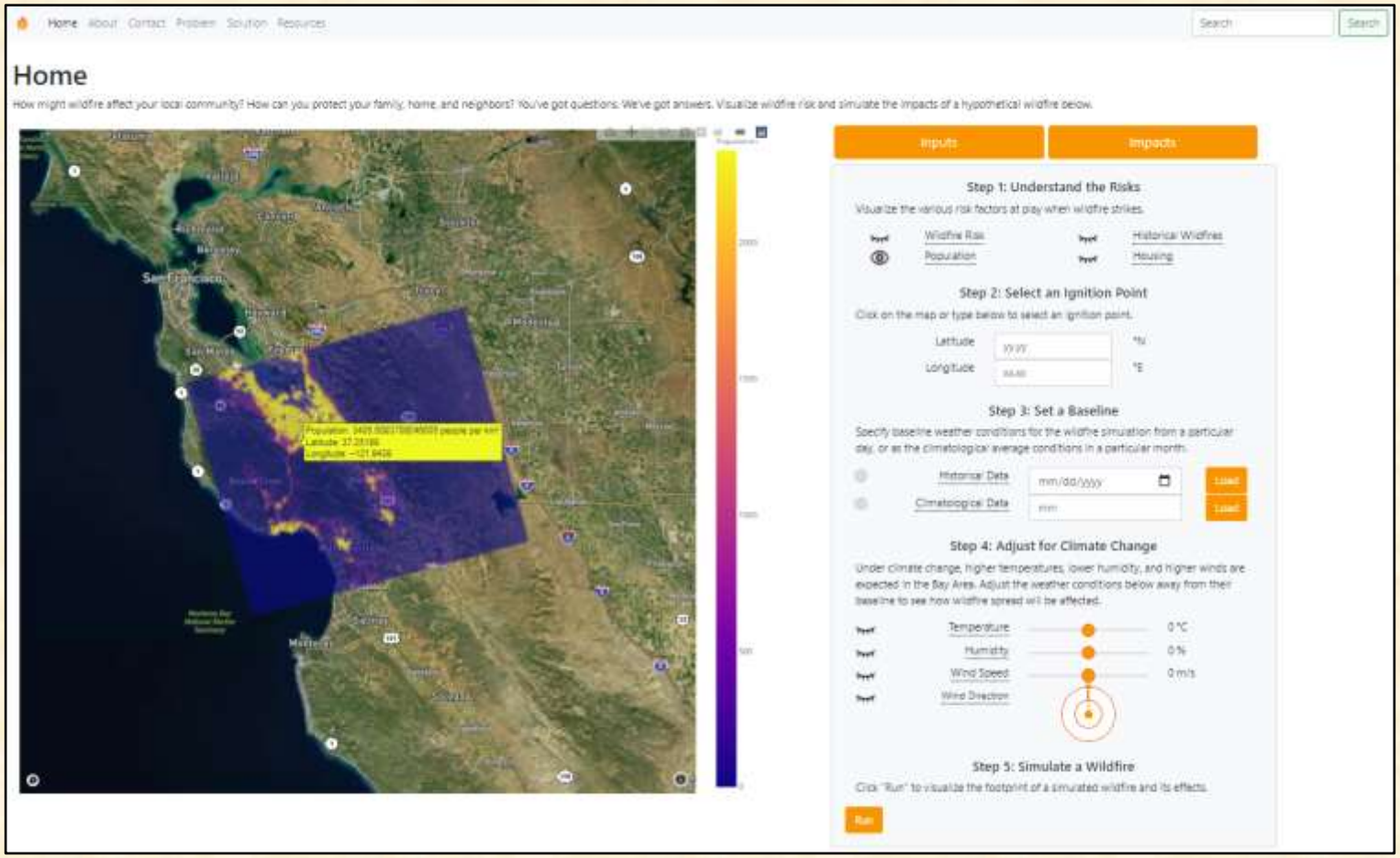
Inputs > Wildfire Risk Visualization



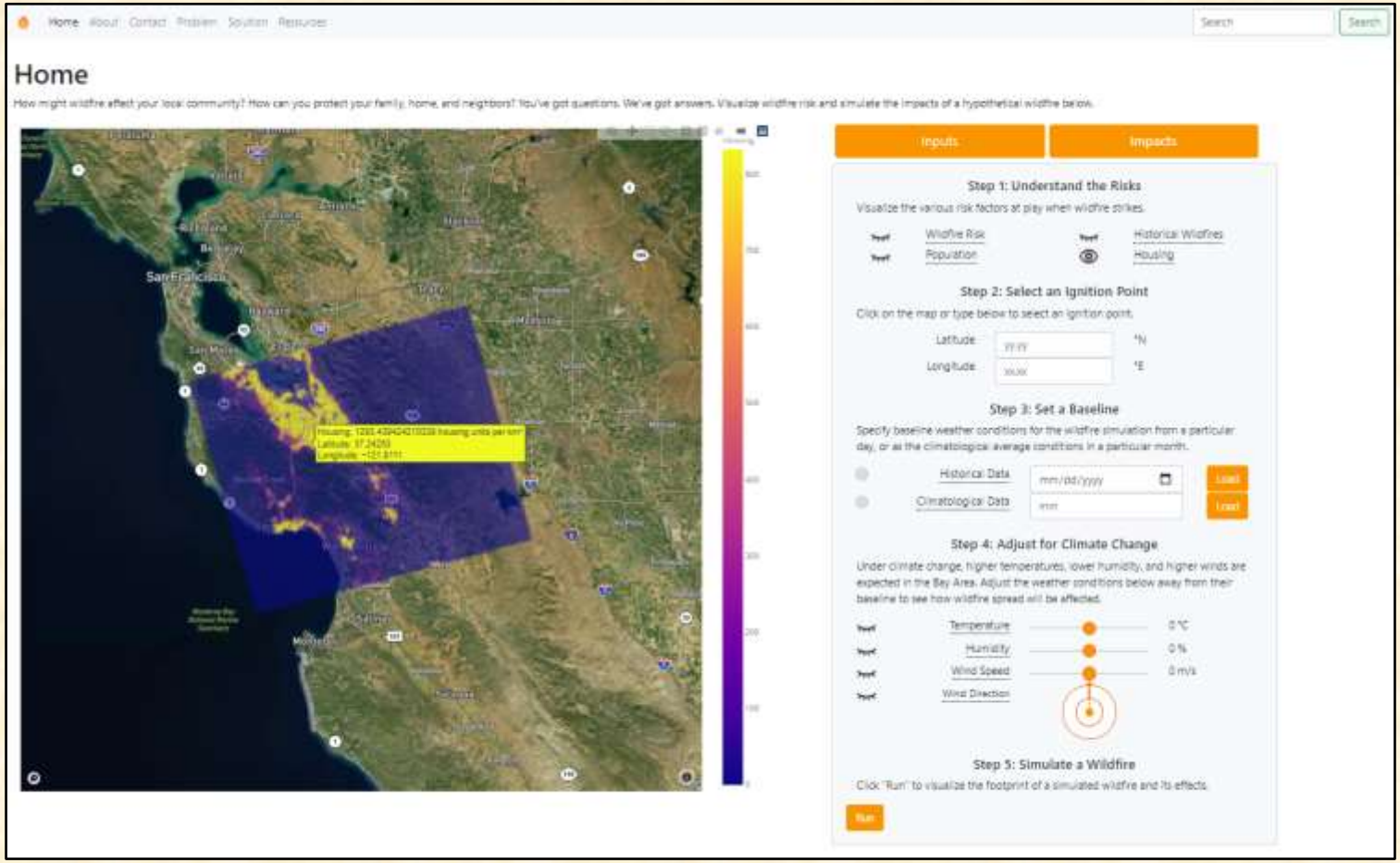
Inputs > Historical Wildfires Visualization



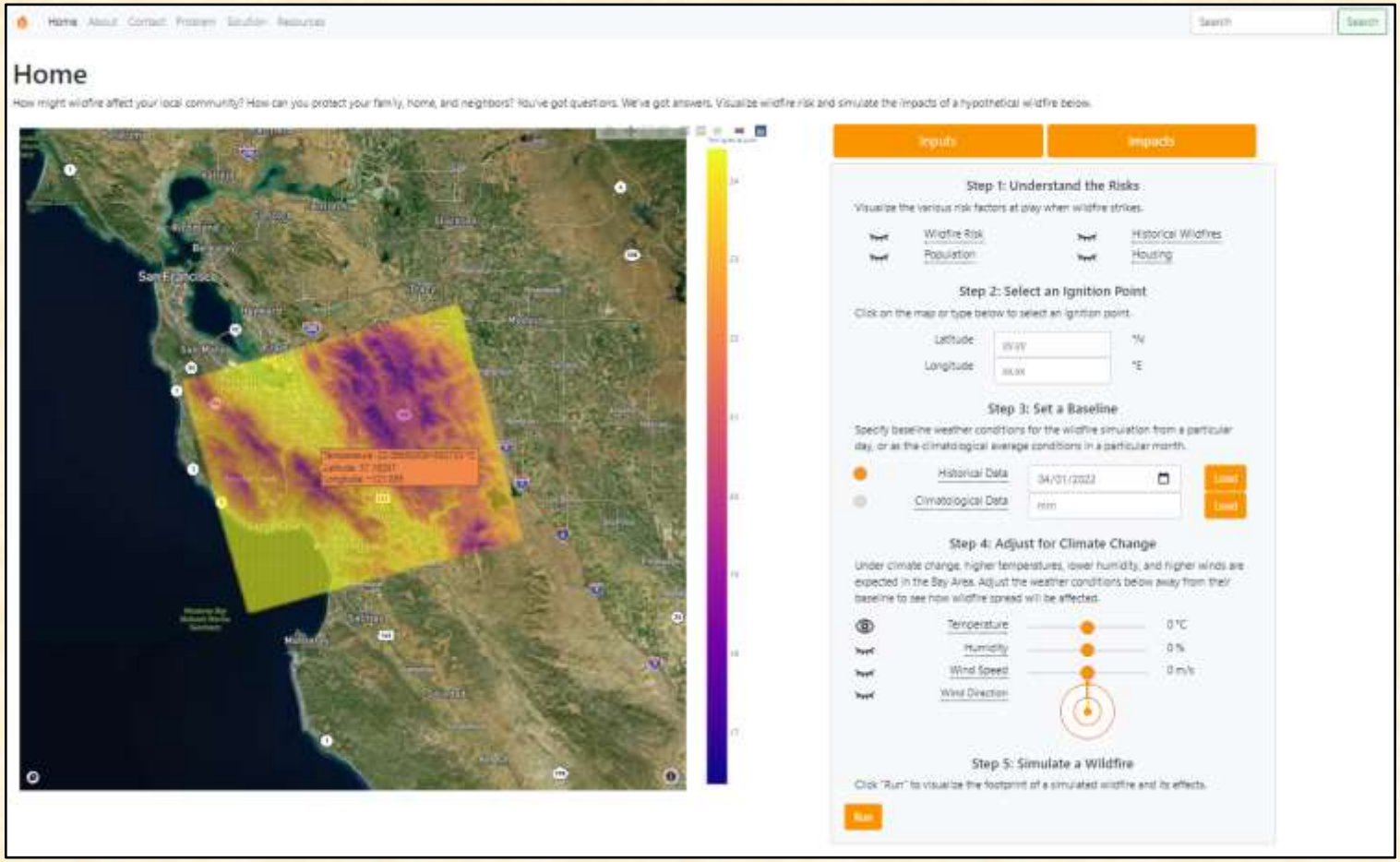
Inputs > Population Density Visualization



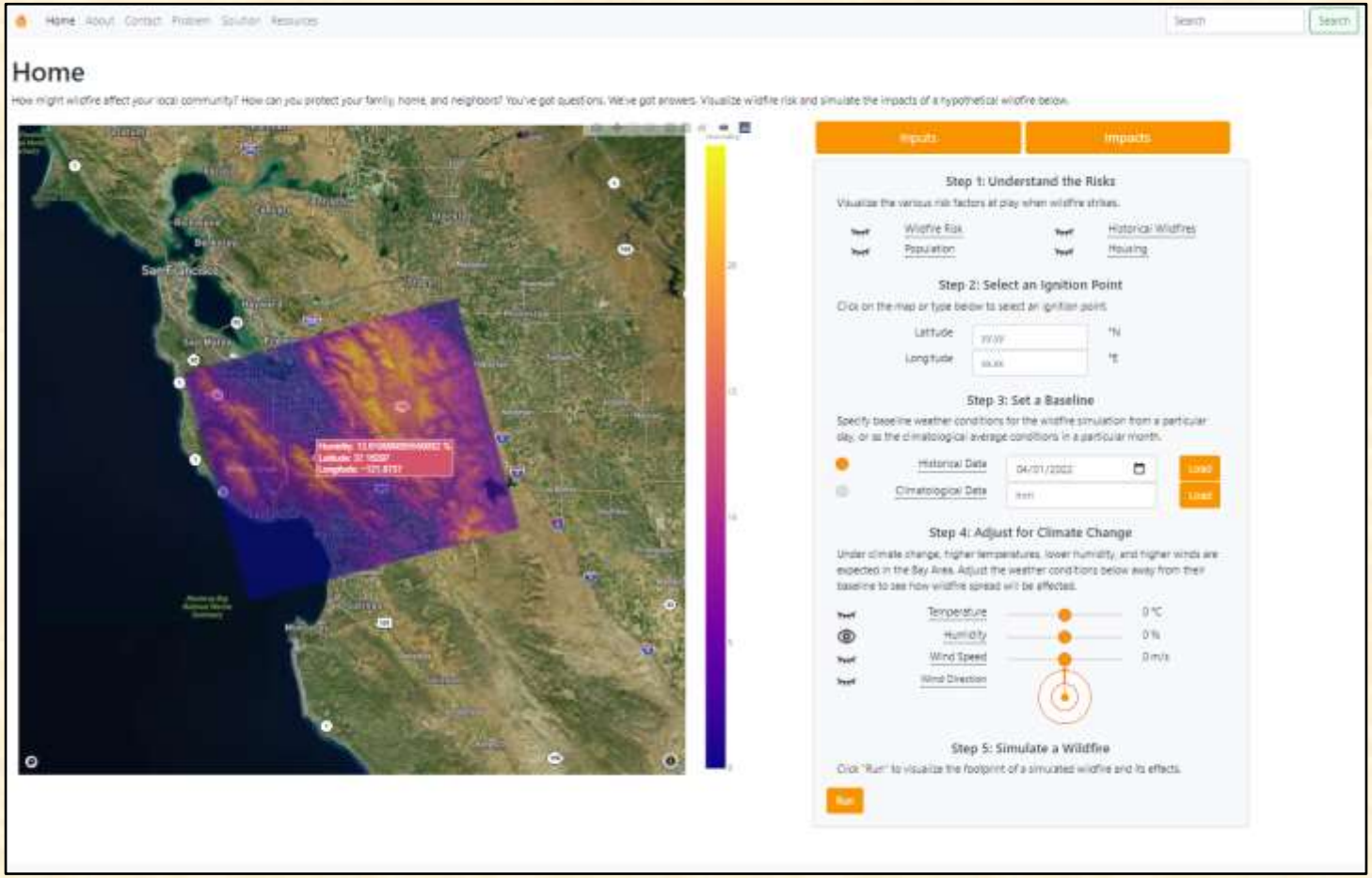
Inputs > Housing Density Visualization



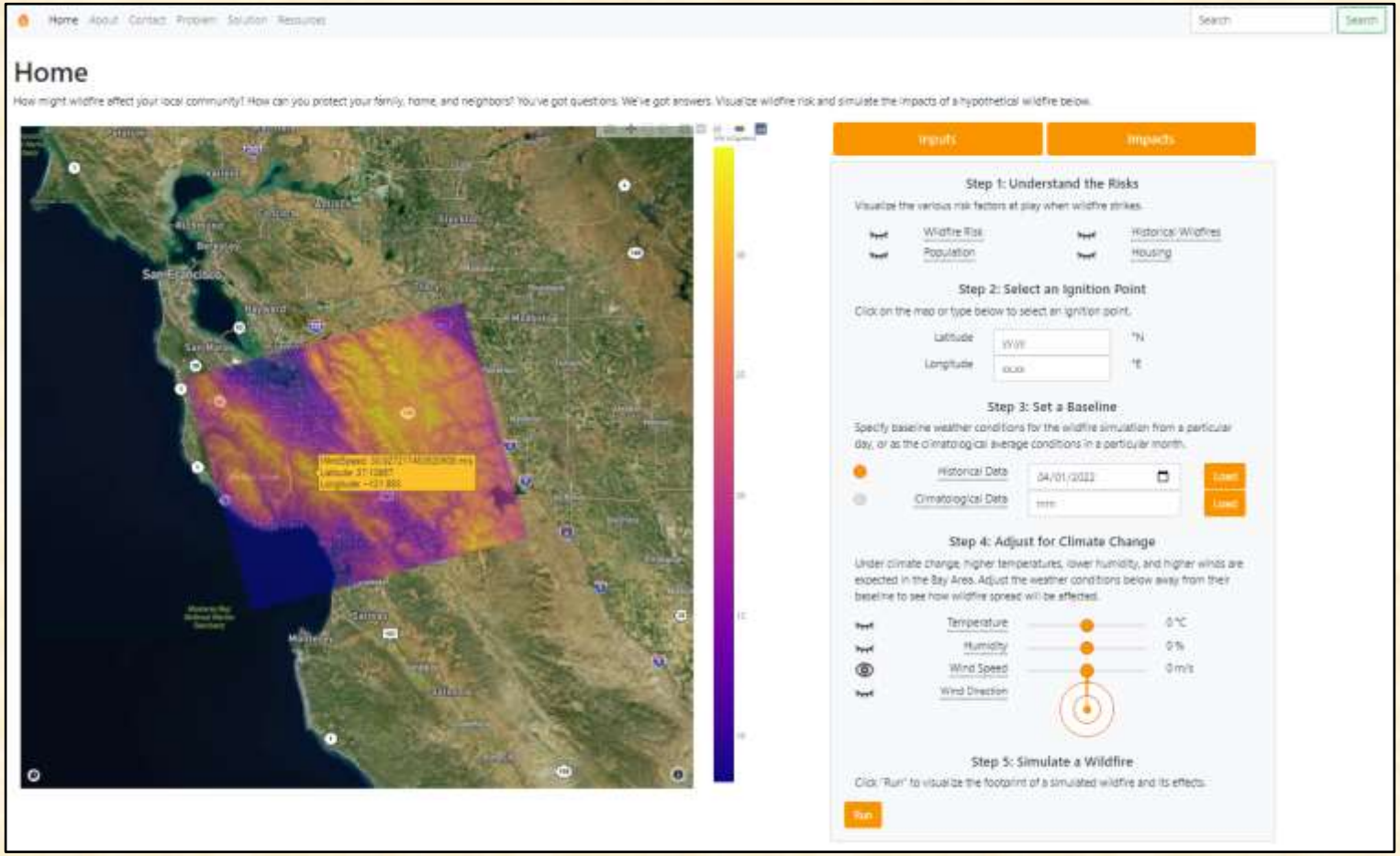
Inputs > Temperature Visualization



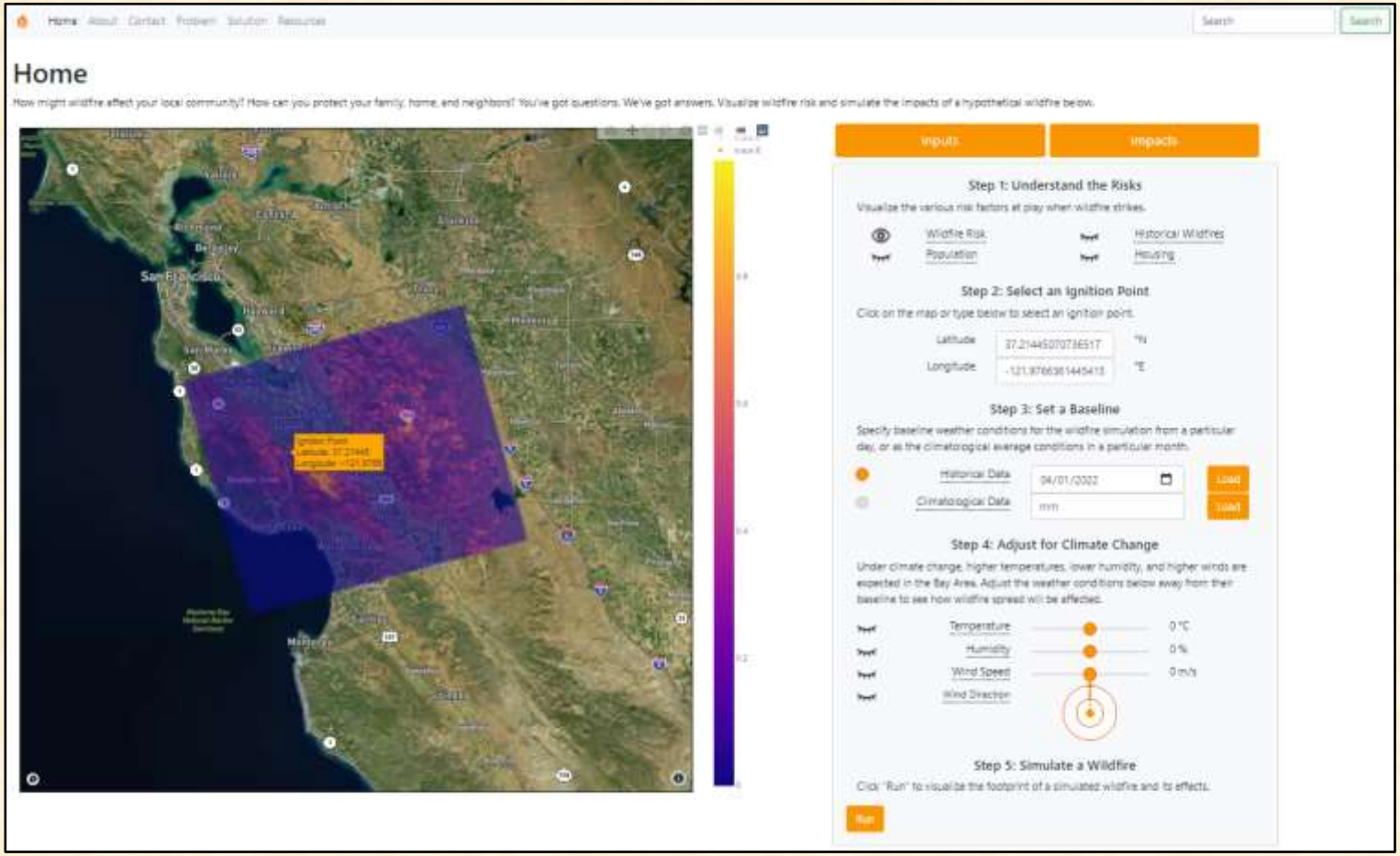
Inputs > Humidity Visualization



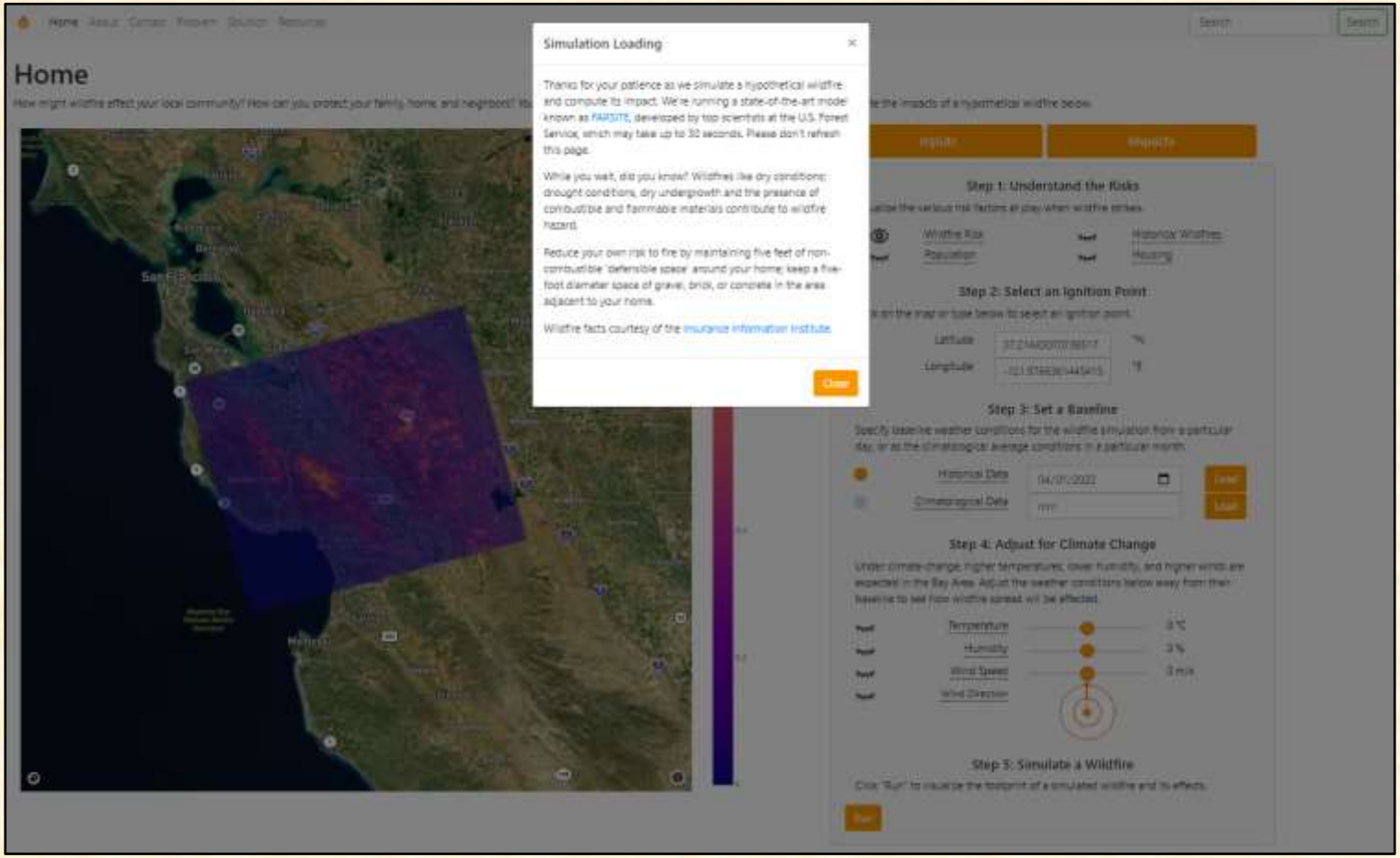
Inputs > Wind Speed Visualization



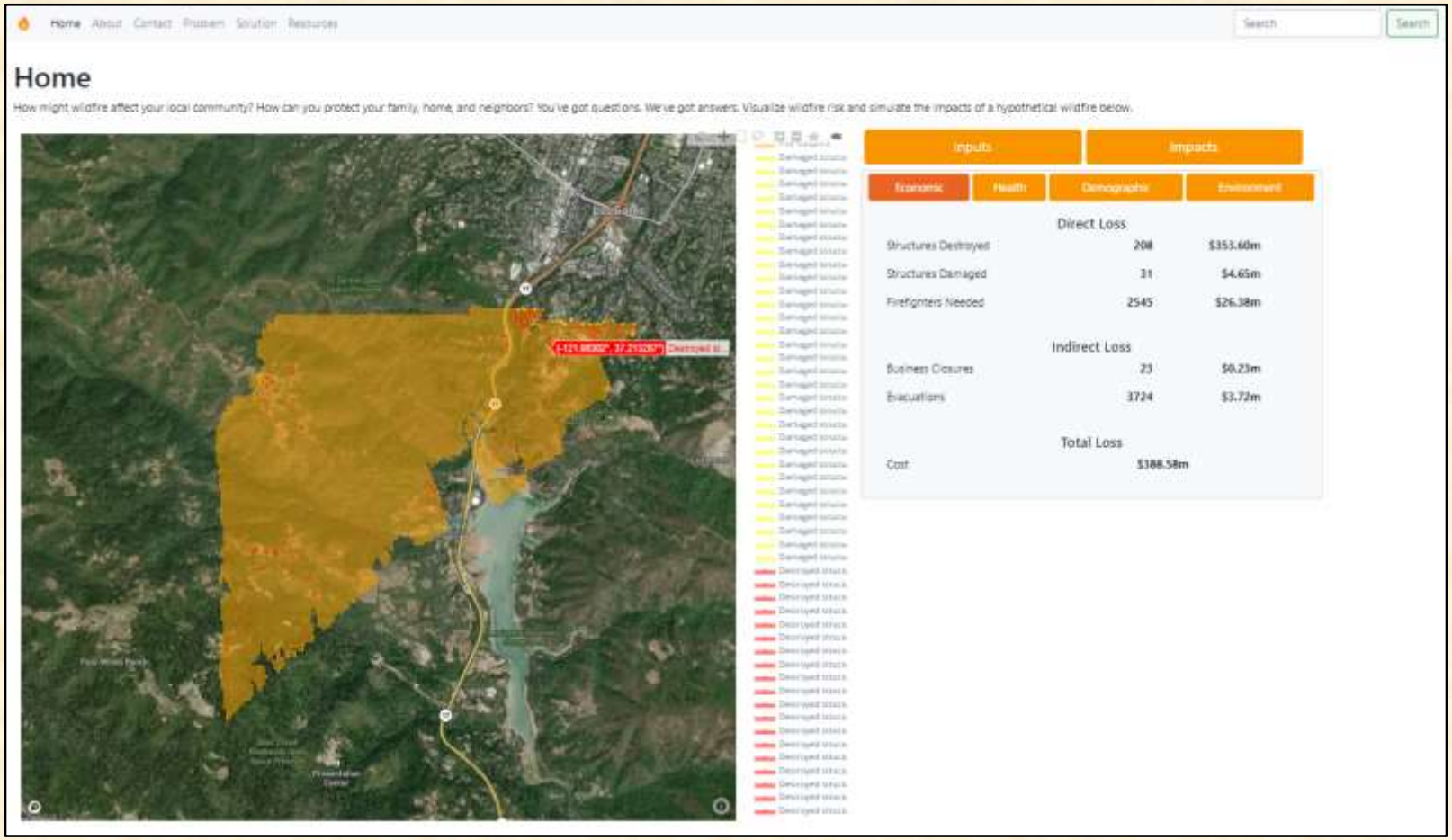
Inputs > Ignition Point Selection



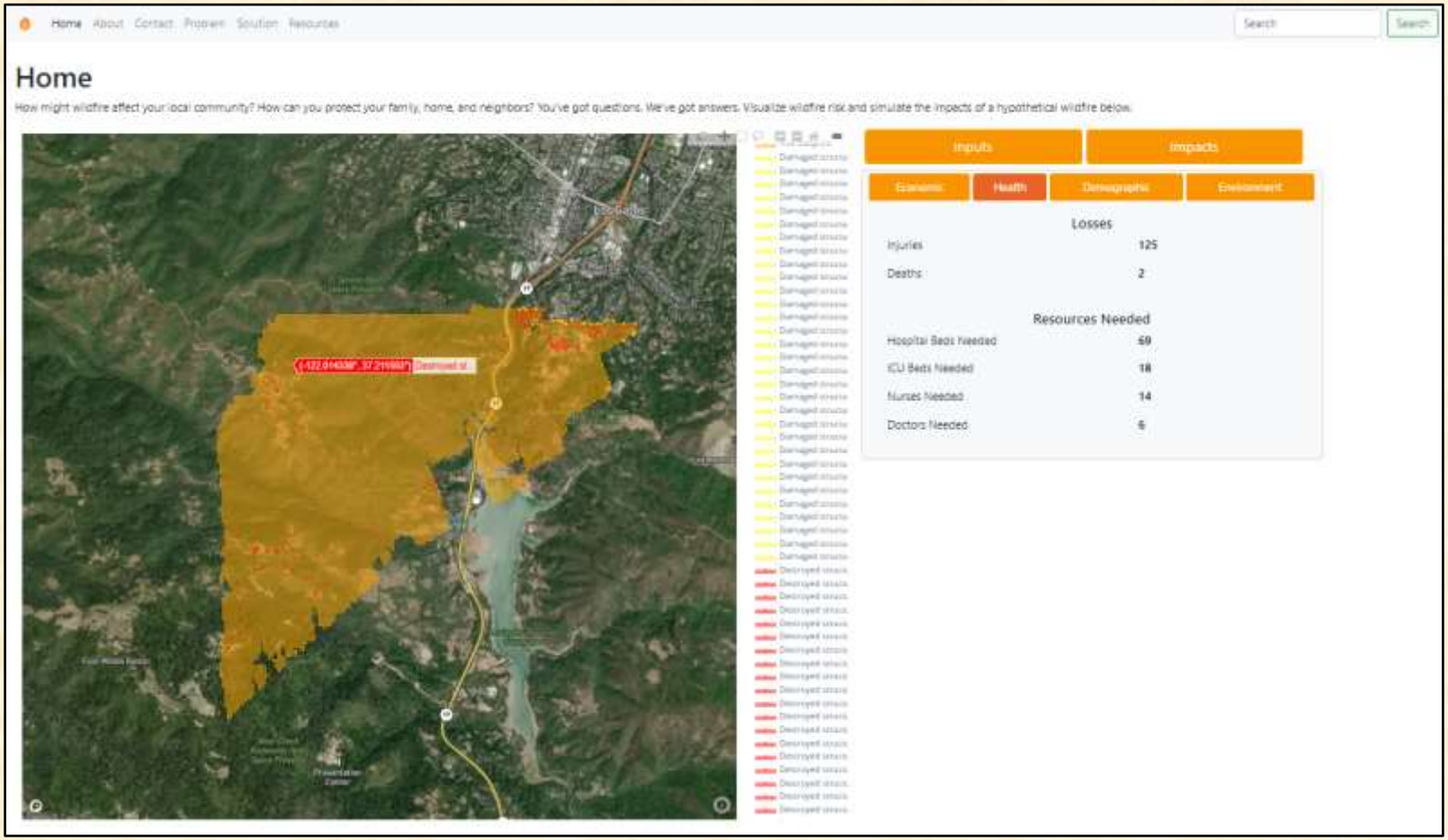
Inputs > Loading Facts & Prevention



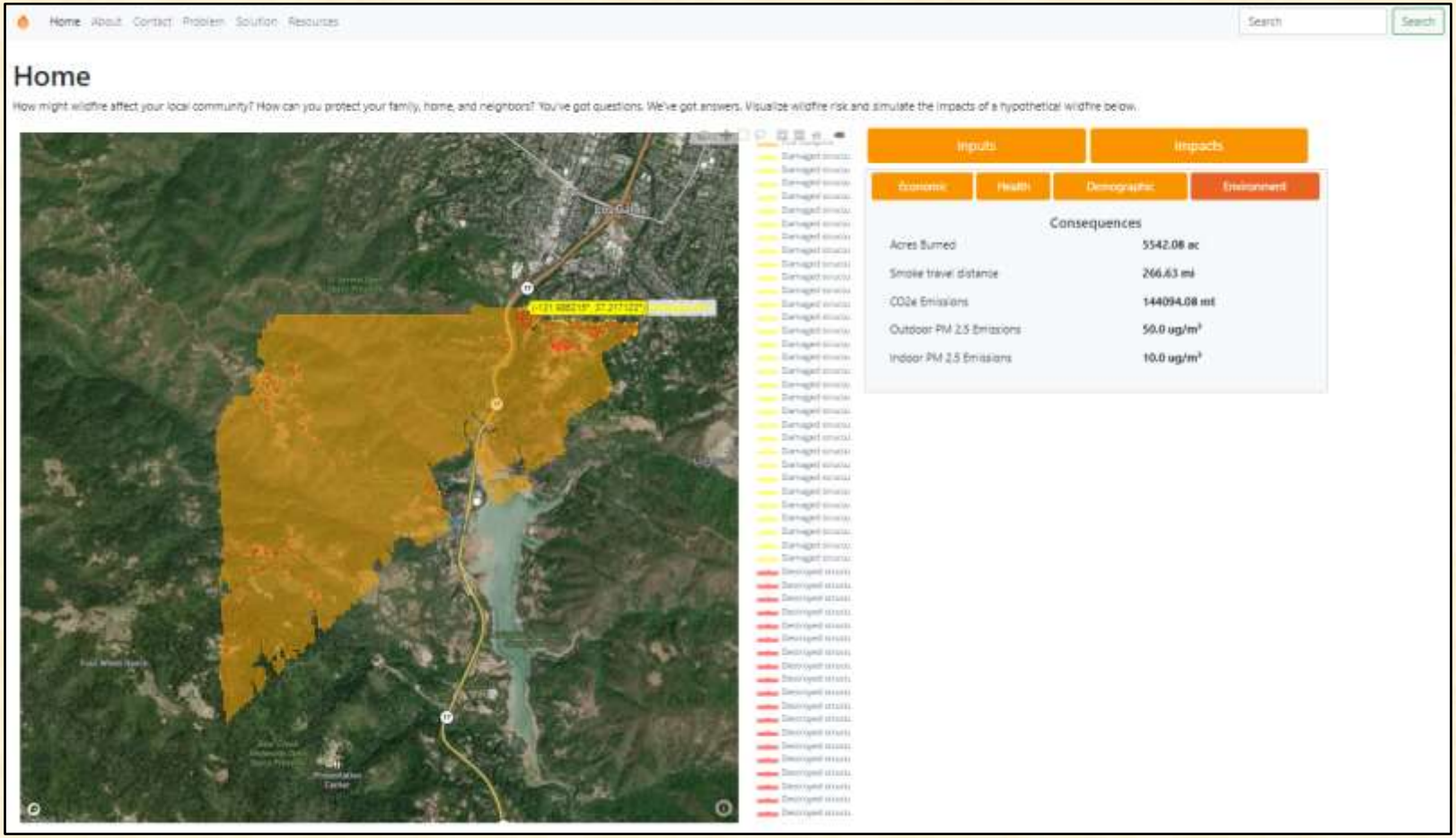
Impacts > Economic



Impacts > Health



Impacts > Environment



What's left to do?

- Features
  - Full historical weather and climate normals integration
- Stretch Goals
  - Integrating spot fire in the simulator
  - Expand demographic calculations with census data
  - Time-stepping burn playback
- Other Tasks
  - About, Contact, Problem, Solution, Resources pages
  - Expand unit testing and CI/CD pipeline
  - Continued UI improvements

Questions?