[microsoft/landcover: Land Cover Mapping](https://github.com/microsoft/landcover)

<https://data.planetos.com/>

<https://www.usfa.fema.gov/wui/>

<https://www.arcgis.com/apps/mapviewer/index.html?layers=a4985d64969743db8feddf01c96c9435>

<http://silvis.forest.wisc.edu/data/wui-change/>

Final Project:

* A map of California that combines live weather mapping with a searchable wildland-urban interface overlay to predict a level of wildfire risk for a specific area
* Searchable Map of California
  + A Map
  + A search bar
  + Color Gradient showing wildfire risk
  + Predictive weather slider
  + Does map projection affect
  + Breakdown of risk factors depending on location
* Wildfire Risk Overlay
  + WUI Overlay
    - Trained Microsoft Land Cover Tool
    - Uses an algorithm that determines the overlap/distance between contiguous built and tree cover/fields areas to determine where the WUI is
    - Then compare against existing maps to measure accuracy
    - Middle of forest = most risk
      * Based on the amount of contiguous tree cover
    - In the WUI = more risk
    - In field/built area = less risk
    - In the water = least risk
  + Live weather in California
    - High temperatures. Low humidity. Little rainfall. Dry vegetation. Fast winds
    - Figure out parameters that equate
  + Weather/WUI combination algorithm
    - Take percentage factors from WUI model and weather data and overlay to create single risk percentage of wildfire
      * Most risk = middle of forest, high temperature, low humidity, little rainfall, dry vegetation, fast winds
        + 1.00
      * Least risk
        + Antarctica on the Summer Solstice
        + 0.00

Who does what:

* Research
  + Figuring out what map to use
  + Figure out what parameters to align
    - Research WUI and weather to figure out how wildfires start (more research - **Max**
* Website
  + How to host the website
  + How to implement the website - **Kuro / Nithiin**
  + Flutter may be a good idea
  + Use mapping/UI within this website
  + Overlay the risk
  + Branding, logos, design assets (icons, illustrations) - **Kuro**
* Back-end
  + Training the Microsoft AI to make WUI map (Python)
  + Implement Planet OS weather API
  + Combining the two (Python)
  + Using an algorithm to determine based on location
    - Weather data
    - Land Cover Data

Identifying Levels of Wildland-Urban Interface

Starting 11am EST US 9/18 (8am PST US) (7:30pm IST)

Ending 11am EST US 9/19 (8am PST US) (7:30pm IST)

**For time zones and calculation:**

<https://savvytime.com/converter/est-to-pst-ist-gmt>

For communication, use discord, let’s all meet tomorrow morning!

Website Hosting

* **Github**
* **Firebase**
* Azure if possible