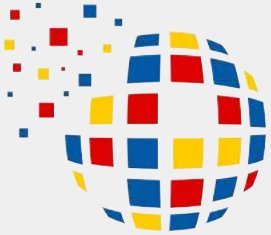

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Actionable climate intelligence for our entire planet


Extreme climate events are more *frequent*, *severe*, and *disruptive* than ever before.
However, current predictive technologies have not kept pace to enable *timely*, and *climate-informed* decisions.

Here's how we make climate predictions today

1

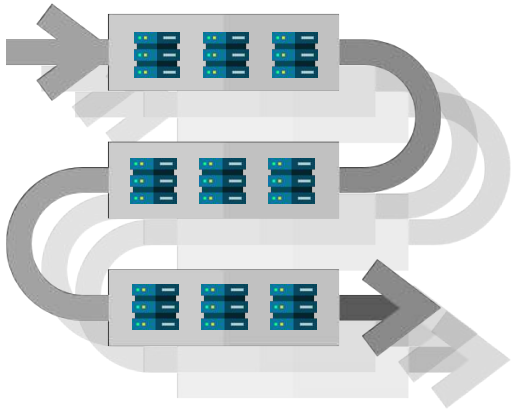
Importing of observational climate datasets into physical models

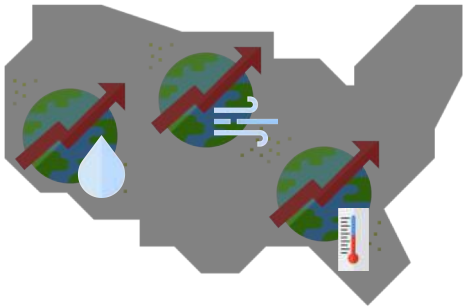
2

Predictions are based on repeated numerical simulations using complex empirical equations

3

Simulation results are typically projections and outputs that require further processing before use





Actionable climate intelligence enables better decision making

Significant Market Opportunity
Wildfire Emulator for Insurers in California

- **Large market segment**
  75bn in Gross Written Premiums across 230 property & casualty insurance companies in CA (California Department of Insurance, 2018)
- **Wildfire is a huge problem for insurers globally**
  Over 500% increase in global insured losses from wildfires from previous decade (Swiss Re, 2019)
- **Lack of solutions for quantifying wildfire risk**
  Existing tools/models are lacking in accuracy, granularity and use of relevant data sources (California Department of Insurance, 2018)

$20b lost by California's homeowners' insurers in 2017/2018 alone (Milliman, 2019), which is twice the industry's cumulative profits since major wildfires in 1991

10% jump in homeowners dropped by their insurance companies in regions affected by 2015 & 2017 wildfires (California Department of Insurance, 2019)

The New York Times

California Bans Insurers From Dropping Policies Made Riskier by Climate Change

California's wildfires have grown so costly and damaging that insurance companies — a homeowner's last hope when disaster strikes — have ...

Dec 5, 2019

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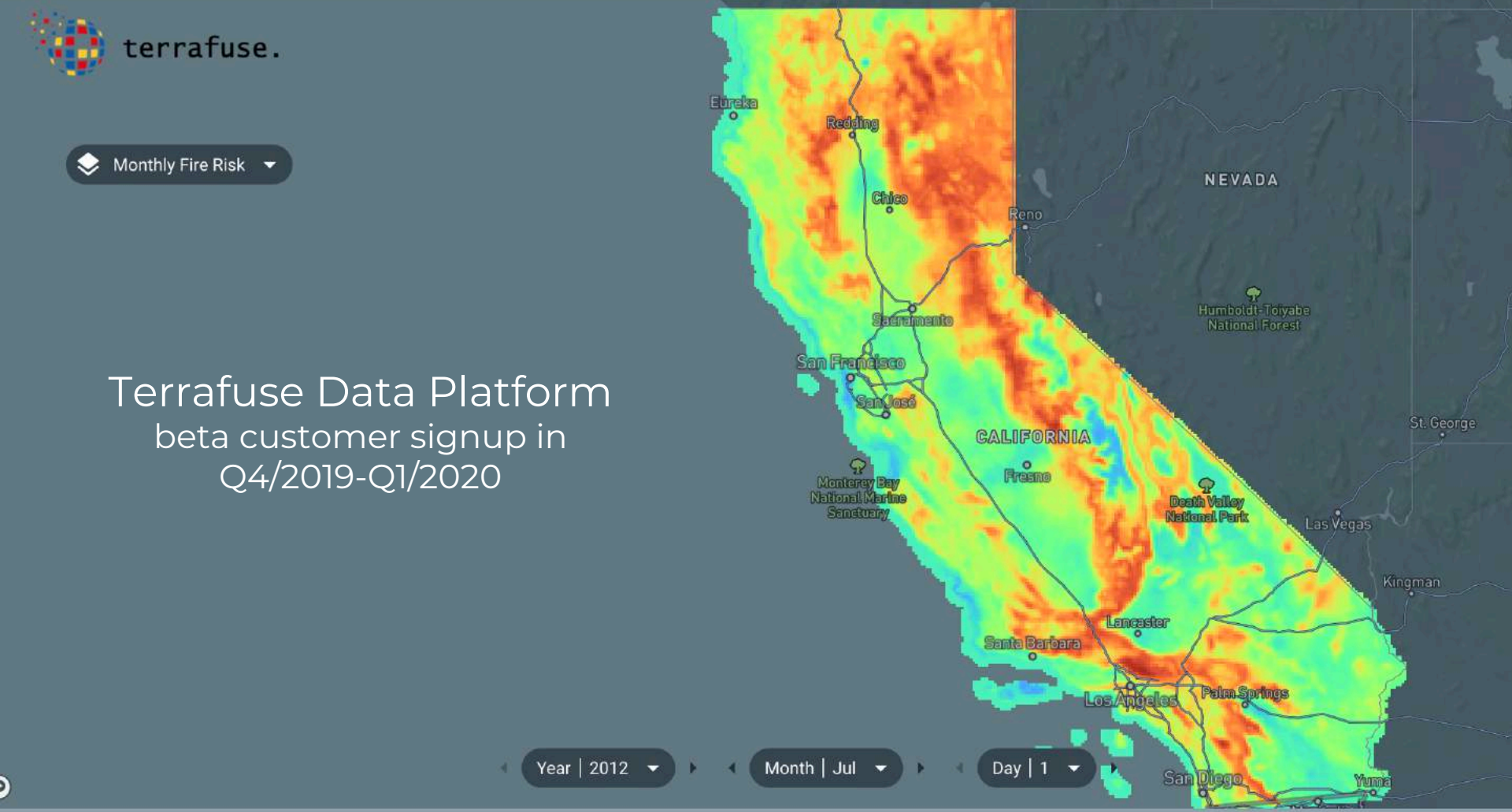
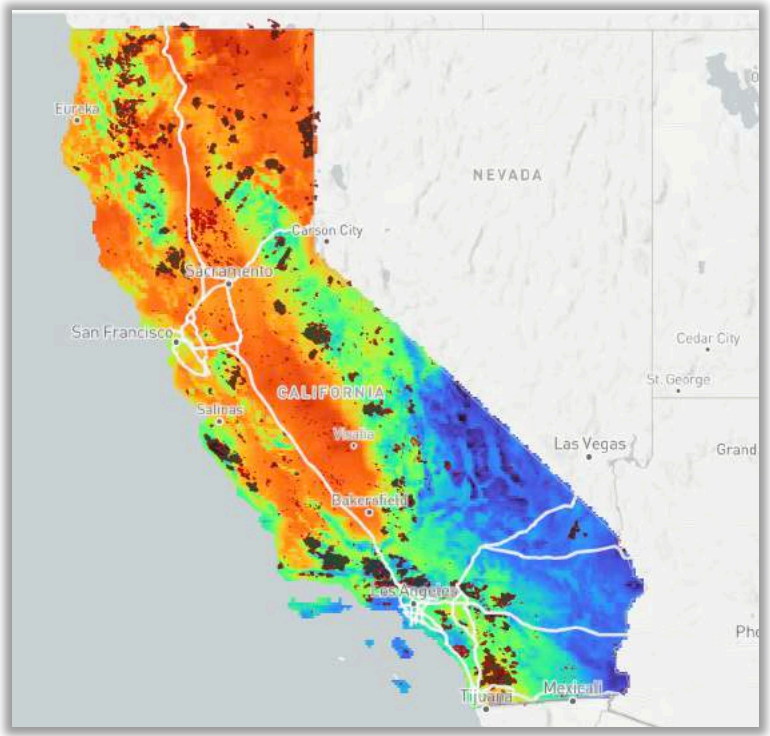


Terrafuse Data Platform

beta customer signup in Q4/2019-Q1/2020

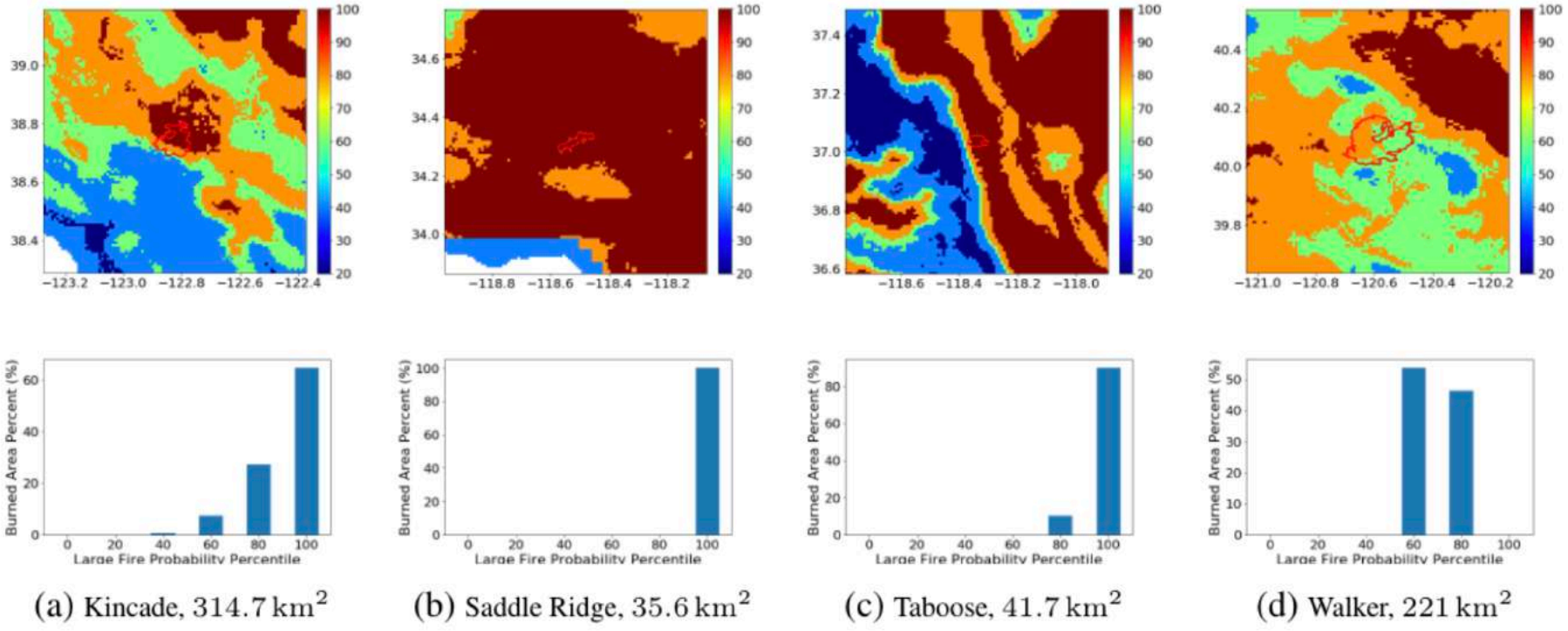
Wildfire hazard prediction with machine learning



Hazard index: probability that a large wildfire will take place at a given location

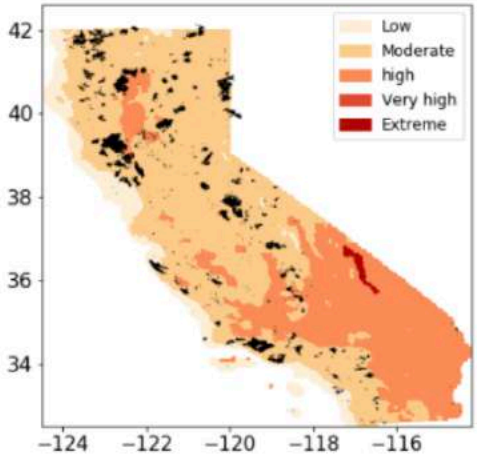
- conditional on vegetation, meteorology, and topography patterns
- at different time scales: next-day, next-week, next-month, etc.

Terrafuse wildfire hazard index is predictive of spatial wildfire spread

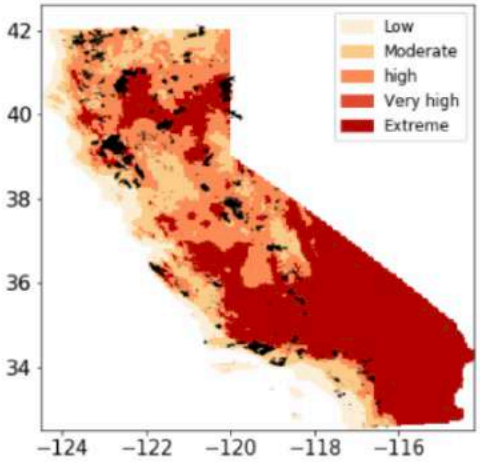


(a) Kincade, 314.7 km^2 (b) Saddle Ridge, 35.6 km^2 (c) Taboose, 41.7 km^2 (d) Walker, 221 km^2

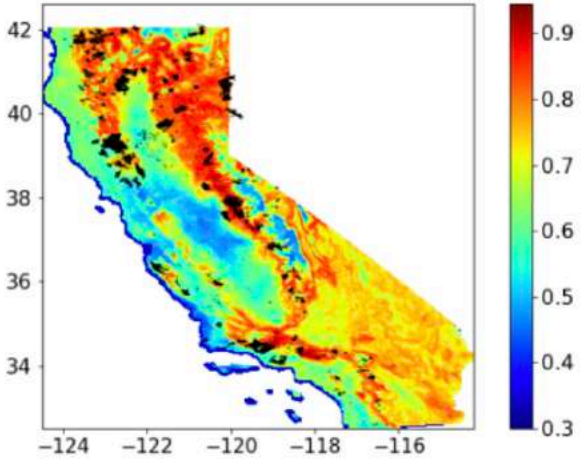
... And is superior in predictive power to existing tools in insurance



(a) FFDI

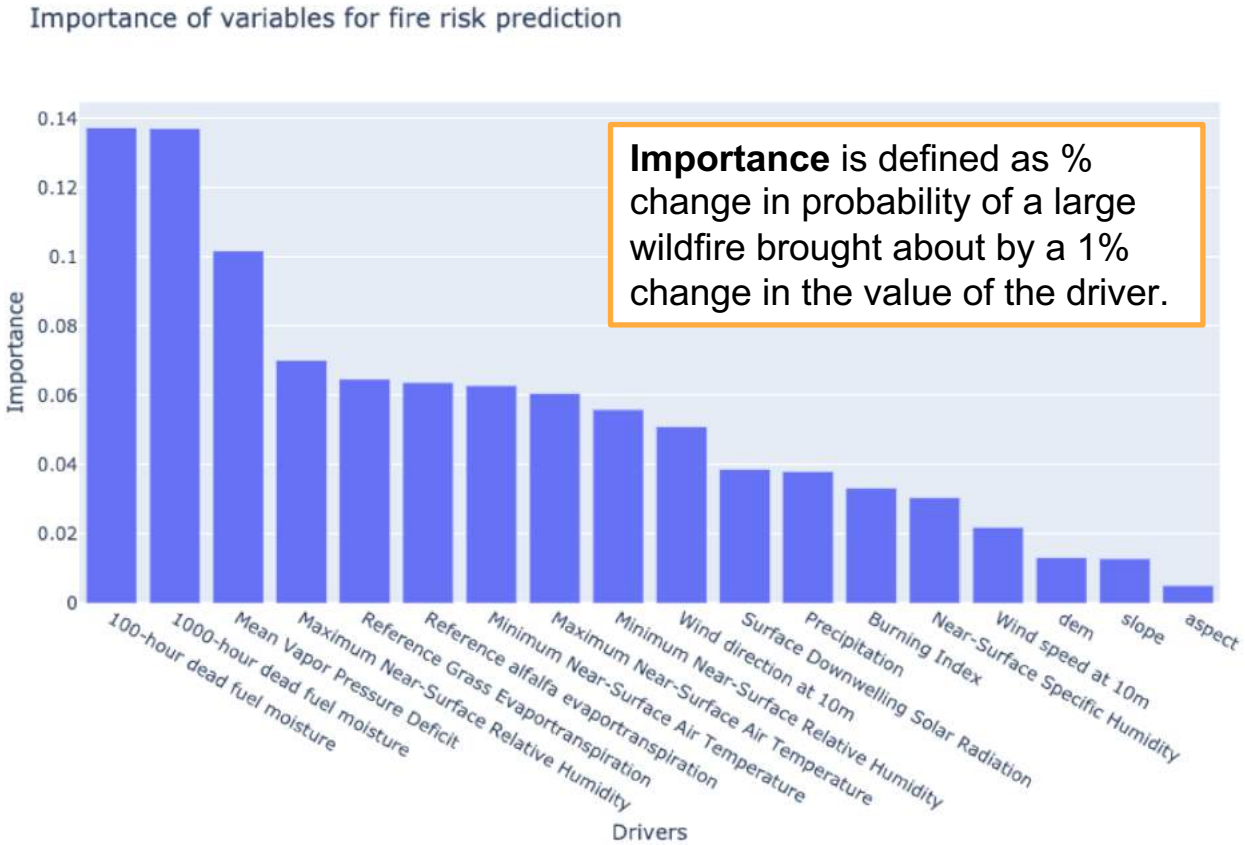


(b) SFDI

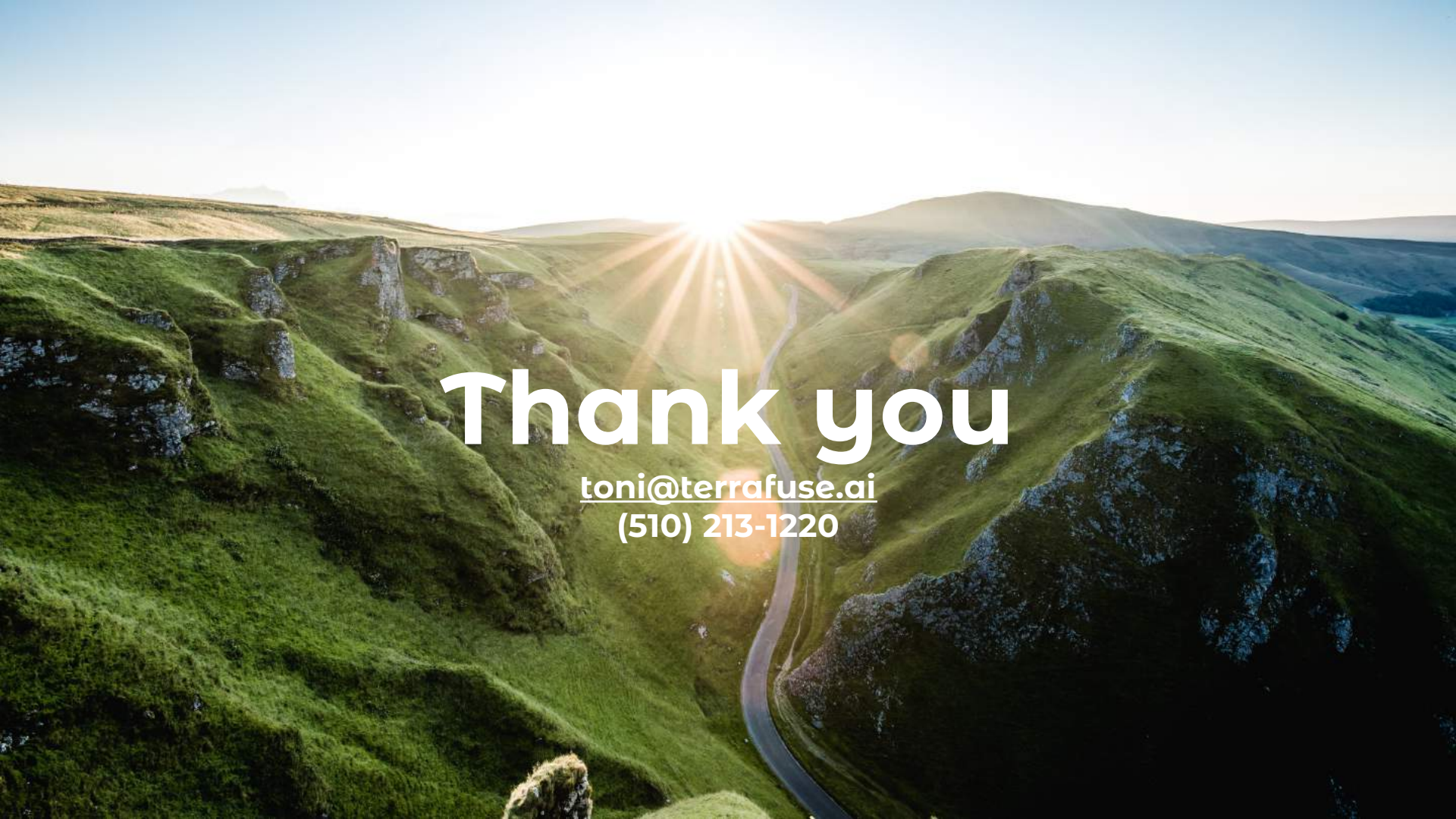


(c) Terrafuse

Drivers of (daily) wildfire risk: aggregate view



- Top drivers at monthly timescales are fuel (vegetation) moisture levels
- Medium-term average atmospheric conditions are more important than shorter-term fluctuations
- The model allows to compute driver importance on per-region / per-location (e.g., patch of 10kmx10km) basis


Thank you
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