

# SENT.in

Valley Harpy Eagle presents a tool  
capable of predicting the risk of fire in  
a given location.

# The Problems

## Problem 1

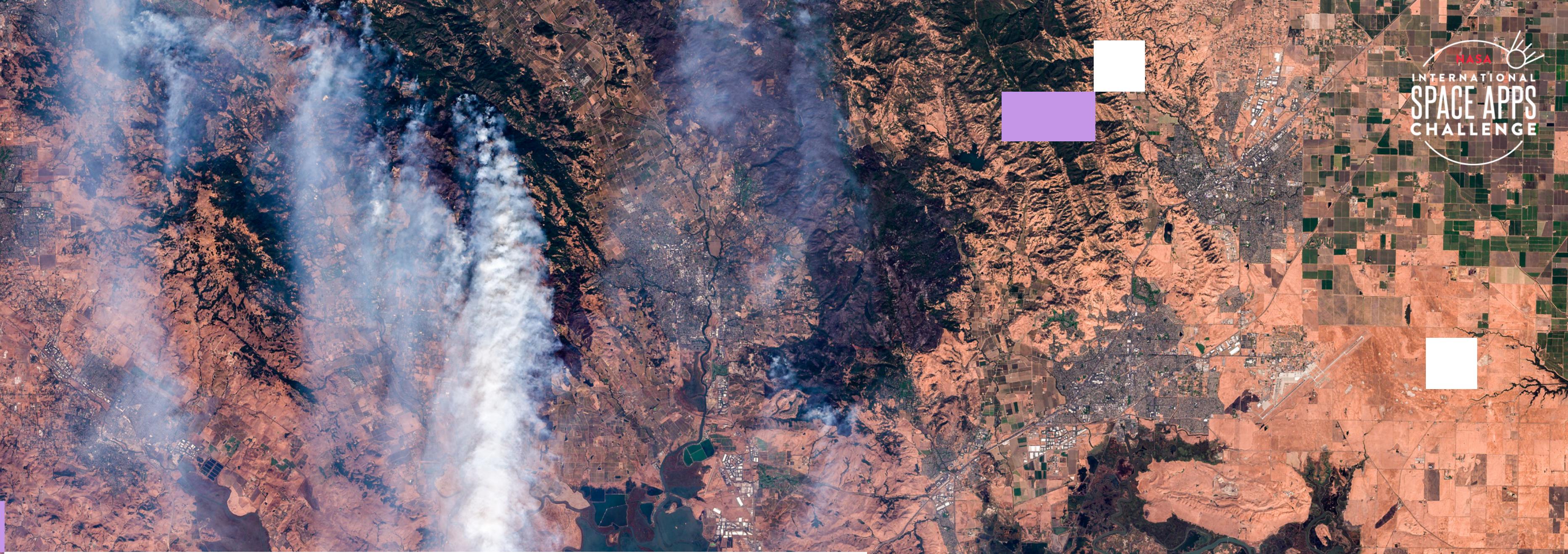
Health and Economic issues caused by the wildfires destruction.

## Problem 2

Population without easy access to fire data.

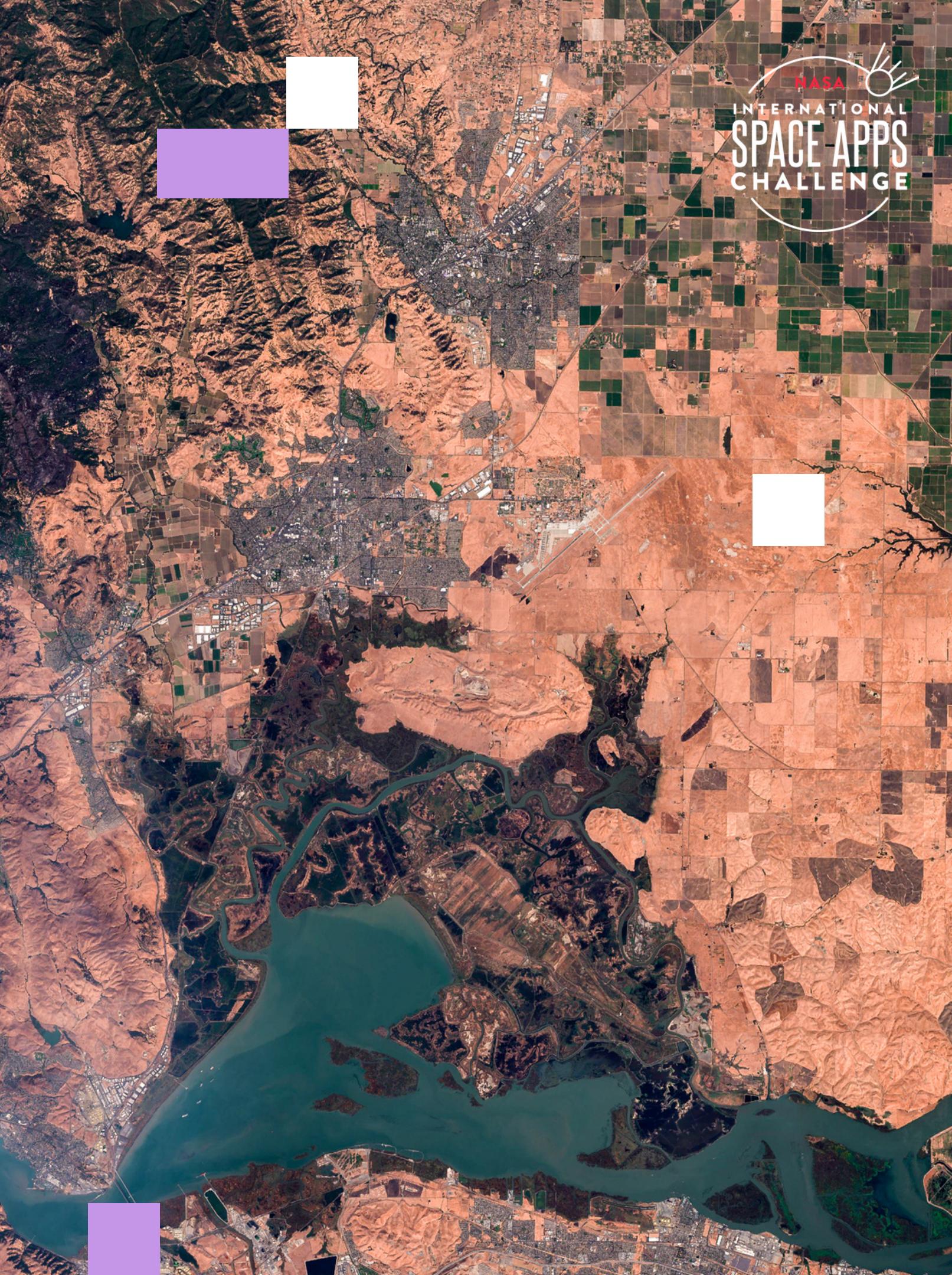
## Problem 3

Lack of ancillary data to help decision-makers take the best approach to the problem.



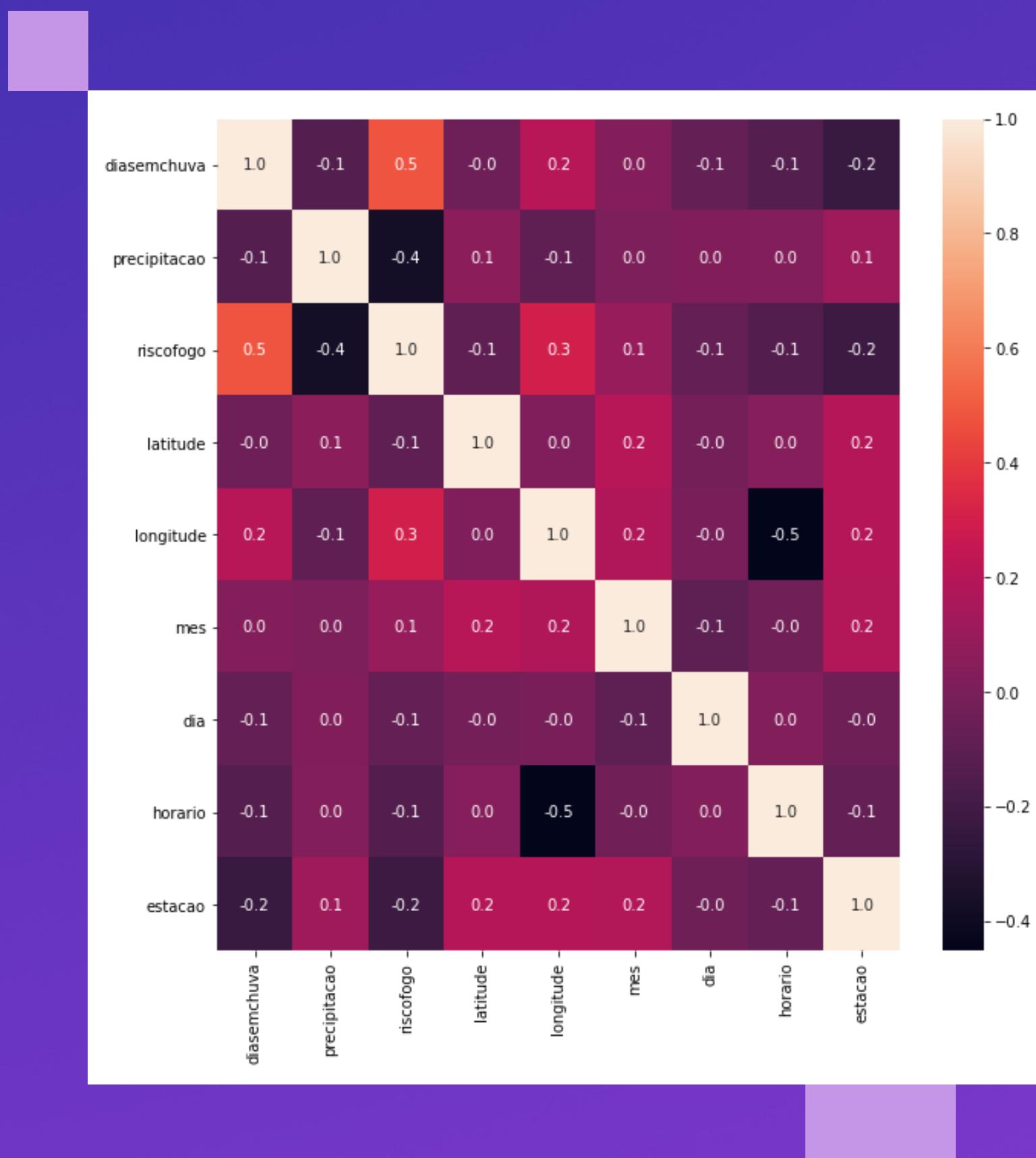
# The Solution

A system capable of predicting wildfires and aligning such information with data that can assist decision-makers in determining the best approach to the problem.



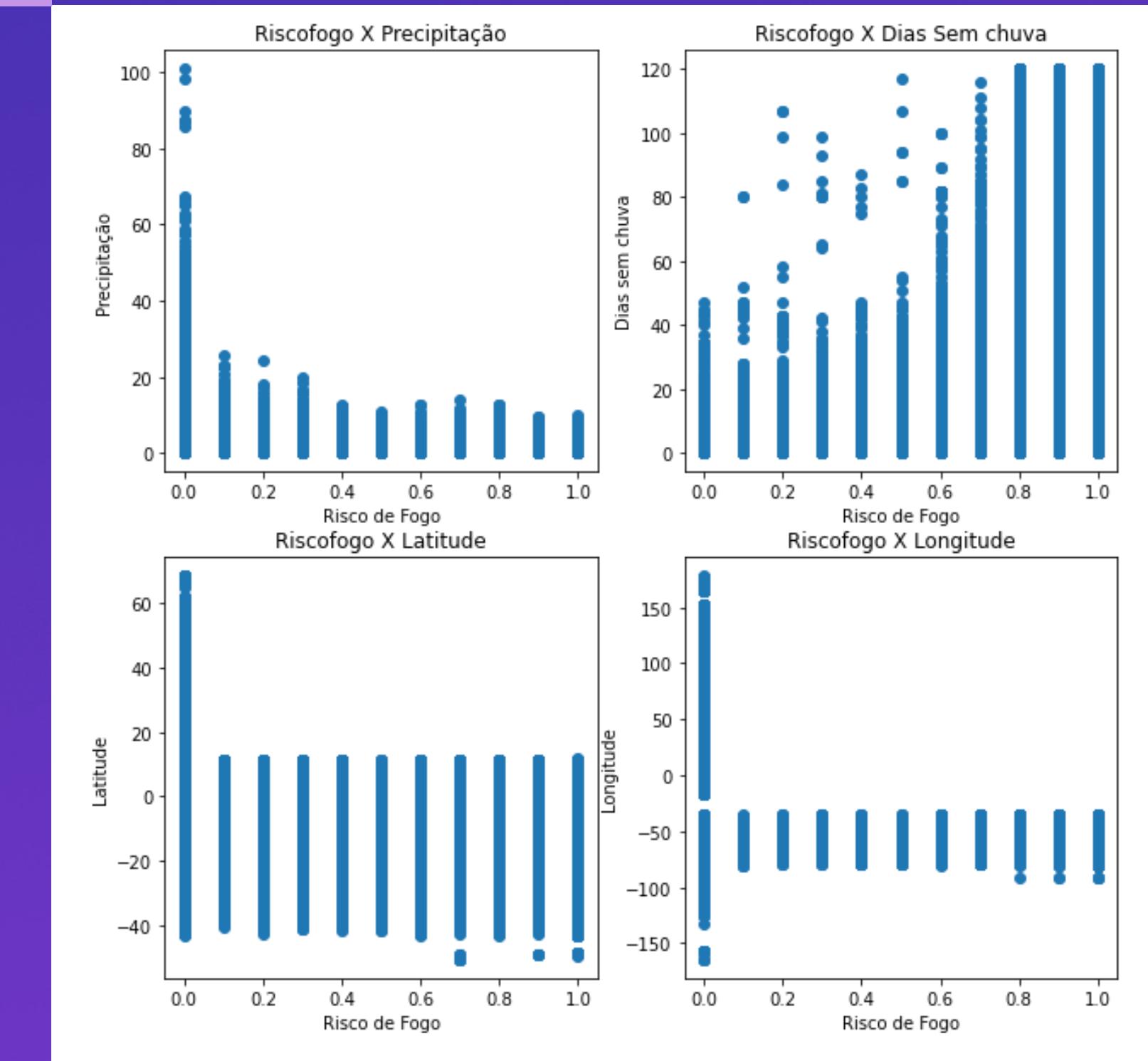
# Correlation Table

SENT.in uses a combination of satellite sensor dataset to predict a certain region susceptibility to wildfires. In this example, you can see our correlation table, used in the machine learning process. During our trials, we could find a much higher correlation between "riscofogo" (Risk of Fire) and "diasemchuva" (Days without Rain). On the other hand, there is a negative correlation among Longitude and "Horário" (Time).



# Risk of Fire vs Variables

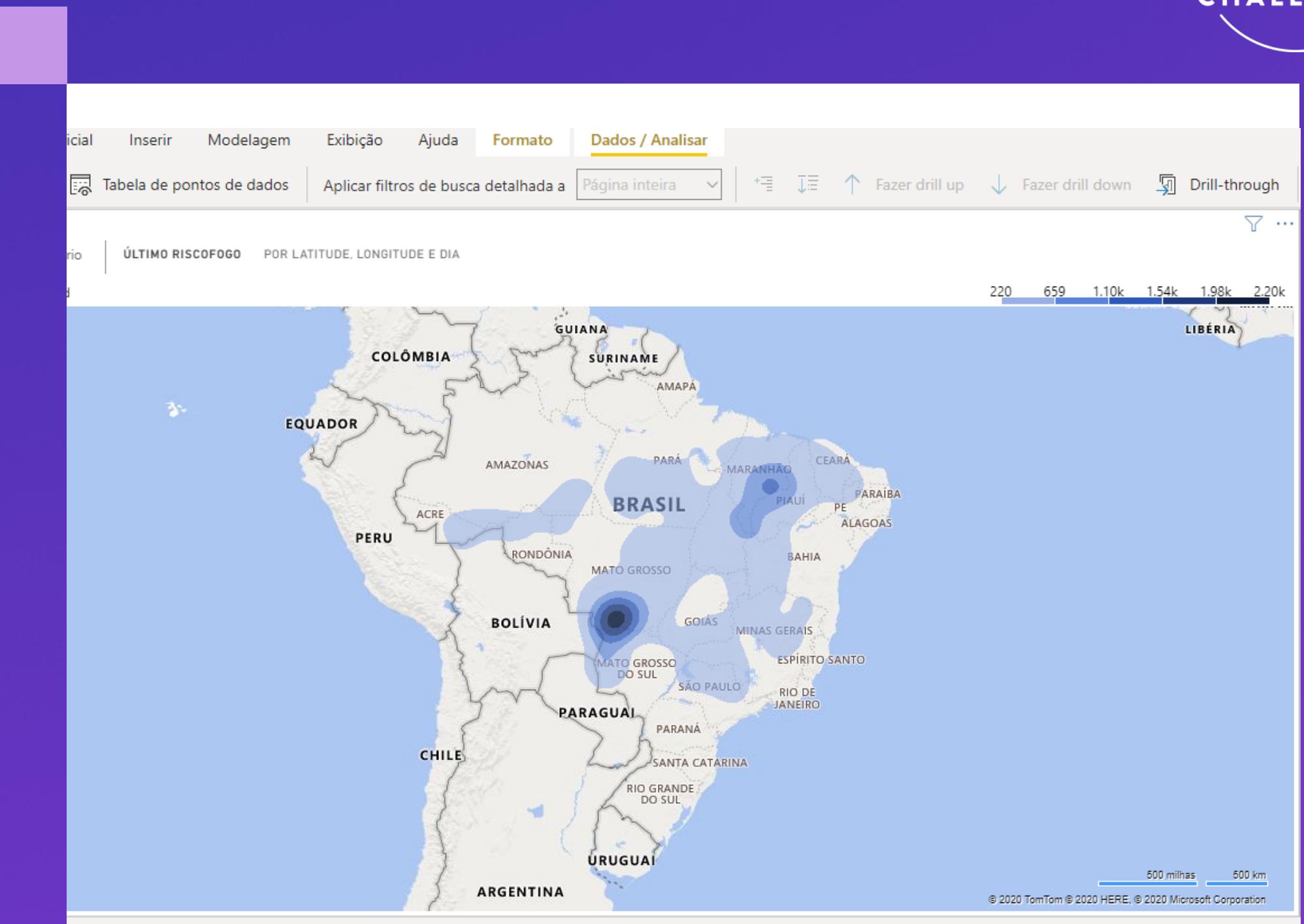
The graphs on the side serve as a second validation for choosing the variables that we used to calculate the fire potential based on the influence of each one of these elements. For example, as we can see, the negative correlation between precipitation and the risk of fire, meaning, the higher the level of precipitation, the less chance of a fire occurring, as opposed to the risk of fire and the period without rain, as exemplified.



# Heat Map

With SENT.in's initial prototype, we were able to build a heat map that could support decision-makers, scientists, and even ordinary citizens to interpret the data presented as it appears on the image.

Eventually, we plan to include a comprehensive system, which presents not only the risk of fire in a given region but also data that goes from socioeconomic aspects of the population close to the fire site to what factors led to such an occurrence.



# The Team



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Sales**  
Python Programmer

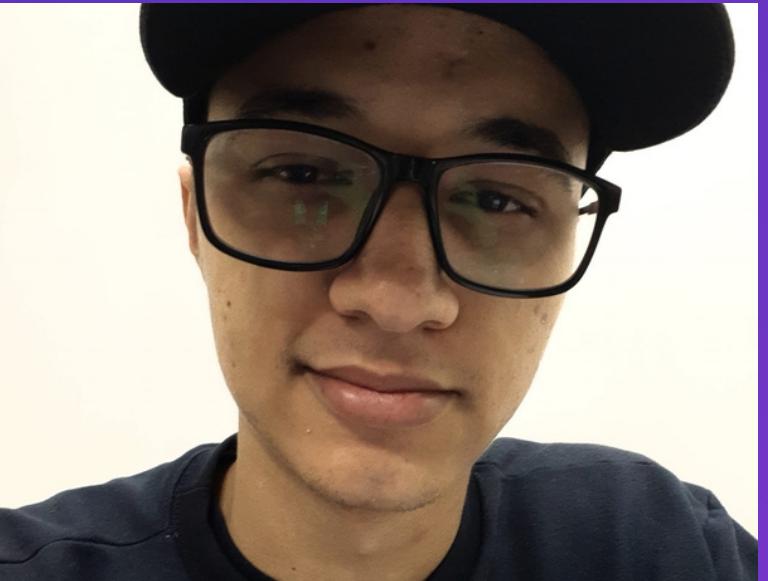


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