Forest Fire Report

Joel Cepeda, Jonathan Richards, Rohan Shah, Matthew Bradley, Kaushik Sivakumar

12/10/2021

Introduction

Forest Fires are extremely damaging ecologically, destroying wildlife habitat, as well as contributing to greenhouse gas emissions. Forest fires also cause severe damage to humans, destroying homes, and leading to economic burdens. And there is mounting evidence to show that as climate change worsens, forest fires will increase.

For these reasons, it is important that humans work towards finding effective ways to mitigate forest fire risks. An important aspect of this is learning to identify when an area is at larger risk for forest fires, and taking preventative measures. However, these predictions are very difficult to make. Two useful tools in predicting fires are weather patterns and systems such as the fire weather index system, which tracks indexes that keep track of soil moisture, wind speed, and other factors to examine fire risk in an area.

However, it is very difficult to create a reliable predictive model for forest fires. Trends between fire size and weather patterns are complex, and may not tell the whole story (human response time etc... may also be important factors). Still, analysis of available tools is important can provide meaningful insight to forest fire patterns, and potentially lessen the ecological and economic impact that fires will have in the future. For this reason, we will attempt, through classification and regression, to build a predictive model that takes a variety of input and predicts forest fire area burned.

Data

Bibliography

https://agupubs.onlinelibrary.wiley.com/doi/pdf/10.1029/2004GL020876