**Fire and Weather Hazard Detection and Warning System**

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**Abstract**

Wildfires and other hazards have been something traditionally tracked manually using satellites, aircraft and weather balloons. Our goal is to create a rational agent that can accurately identify and predict the spread of wildfires, floods and other hazardous conditions using image data along with location data.

**1. Introduction**

Wildfires are very dangerous and can cause tremendous damage to properties as well as wildlife as we see so often in places like California and Australia. Current methods for tracking and identifying such hazards while much better than past technology still have room to improve and the technology that has the most potential to improve these systems is Artificial Intelligence. A rational agent can monitor regional data 24 hours a day and report in real time when a hazard is detected. Making the same agent capable of predicting the regions that could be effected will greatly improve the chances for fire departments and rescue personnel to get to these regions before the fire or flood gets there. Thus, fires can be stopped while they are still containable and people can be evacuated and notified in real-time as soon as the threat is identified.

## **2. Background**

## **3. Design Issues**

## **4. Implementation**

**5. Future Work**

## **6. References**