

# MOTIVATION



## Wildfires



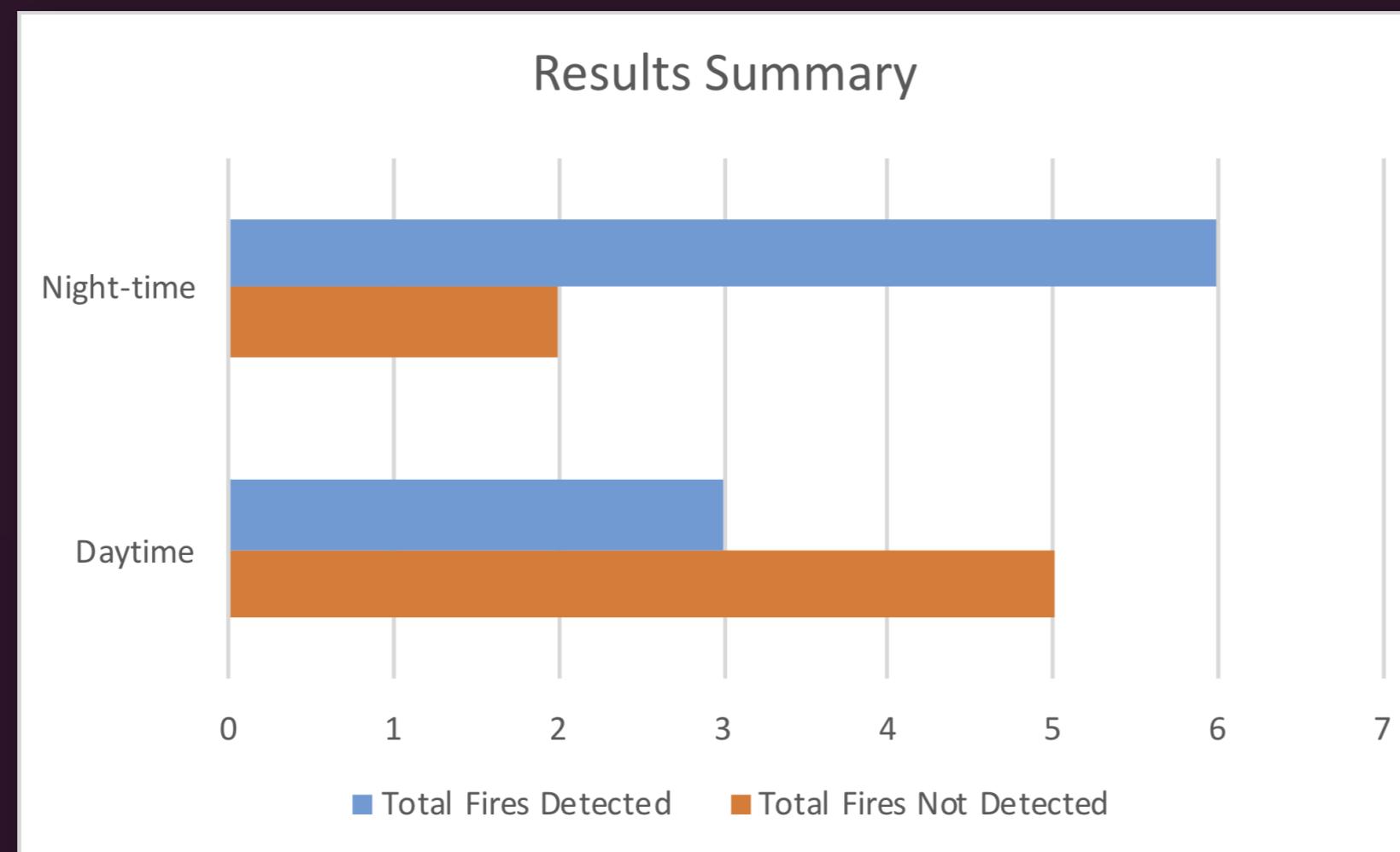
Every year there is irreversible damage to the agricultural land, wildlife, forests and people's lives caused by wildfires.

Wildfires today are acted upon as they happen with no proactive planning.

It is very important that we monitor the fires from an early stage and keep them under control.

# RESULTS

The system shows very promising results with relatively high fire detection accuracy rates at distances of up to 5m. It can detect fire during any time of the day, with higher accuracy at night. However, it recognises flashlights and shiny objects as fires. Overall, it is stable and fast. It can process video at about 5fps and detect fires in under 1 second.



# AIMS



Contribute to the fight against wildfires and as a result, save lives and protect forests.



Design a low cost, portable and easy to use system for fire detection using an Infrared Camera that can be deployed on UAVs, quadcopter drones.

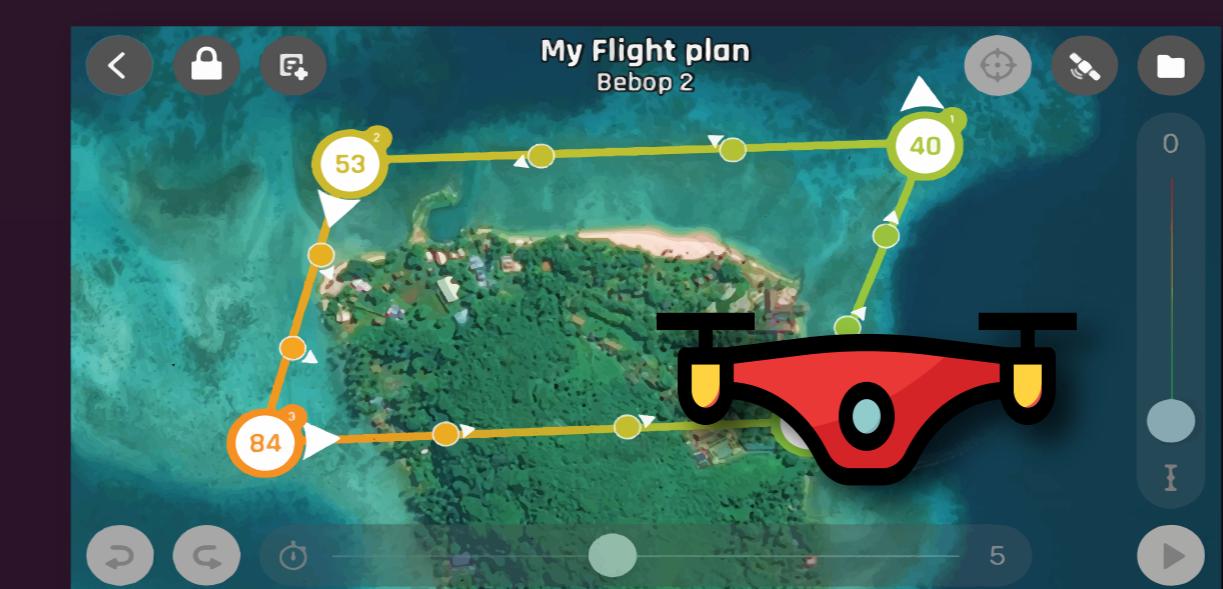


# FUTURE

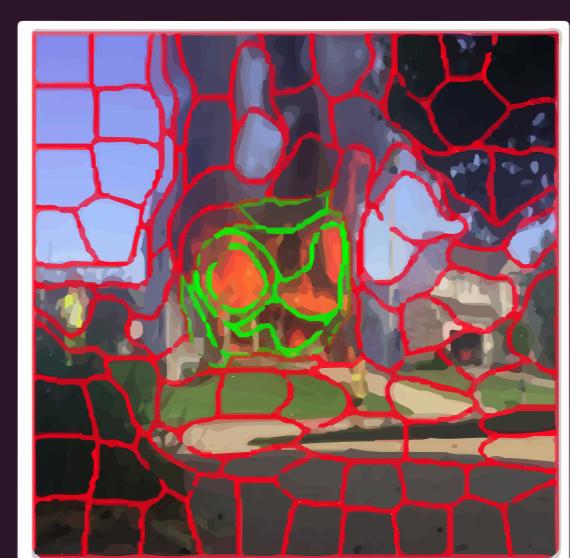
## DRONES

The system can be attached to any third-party quadcopter drone.

Most drones have a feature called planned flight, where points are set on map and the drone visits them.



## IMPROVE ALGORITHM



A better fire detection algorithm can be developed using Convolutional Neural Networks. These neural networks can be trained to detect fires based on already seen fires and predictions from training data.

Professors from Durham University, UK, have researched the idea and showed very promising results.