Gifted Education Fund

AIoT Coding, Engineering and Entrepreneurial Skills Education for Gifted Students

# Automated Forest Fire Prediction

**Student: 35 Valentina BANNER, 30 Maya YAN, 01 Alicia YUEN**

## Objective/Background/Motivation

- Over time climate change increase, therefore temperature increases, and more likely wildfires
- Strong link between climate change and forest fires, due to high temperatures, low humidity, low rainfall and high wind
- Forest fires are very dangerous, and have injured/killed hundreds of people in Hong Kong
- Chinese tradition encourages a lot of fireplay.
- Wildfires also produce a lot of greenhouse gases which is bad for the environment

## Existing Solution

- Safe keepers in the forest. These keep watching an area and cannot be used widely as they are expensive and watch a short range
- Planting and removing flammable trees and plants. This can be bad for the environment and animals habitat
- Governments in more humid and hot places have laws that supposedly prevent fires and tragedies from happening

## Method

1. We first collect information (temperature, humidity, rain levels, etc) with our connected sensors
2. We then send this information to our neural network which will then process this information and predict forest fires
3. With this information, we can make sure to evacuate the forest in the event of a highly likely forest fire, to minimise damage, or keep fire-fighters on the watch

## Resources Needed

- Temperature Sensor
- Humidity Sensor
- Wind Speed Sensor
- Board for AI

CityU Department of Electrical Engineering
香港城市大學
City University of Hong Kong