DRONES FOR HUMANITY

Team Members' Positions

Name	Email	Position
Michael Mascari	mmascari2017@my.fit.edu	Programmer (Computer Vision/AI)
Ballard Barker	bbarker2017@my.fit.edu	Project Manager/ Structures
Matthew Backert	mbackert2017@my.fit.edu	Systems Engineer
Nicholas Davis	davisn2017@my.fit.edu	Avionics/ Propulsion/ Aerodynamics
Brendan Sanders	bsanders2017@my.fit.edu	Production/ Structures
CJ Gagni	cgagni2019@my.fit.edu	Avionics
Justin Williams	justin2017@my.fit.edu	Propulsion
Hamdan Alblooshi	halblooshi2016@my.fit.edu	Propulsion

Faculty Advisor and Client

- The CS faculty advisor for this project is Dr. Debasis Mitra.
- The client for this project is the project team.
- Client meetings on Fridays at 10AM

Project Goal and Motivation

Our Goal: To design a drone capable of detecting forest fires and informing its operator of the location of a detected fire

Our Mission: To create an easy to use system to prevent the occurrence of a large-scale forest fire

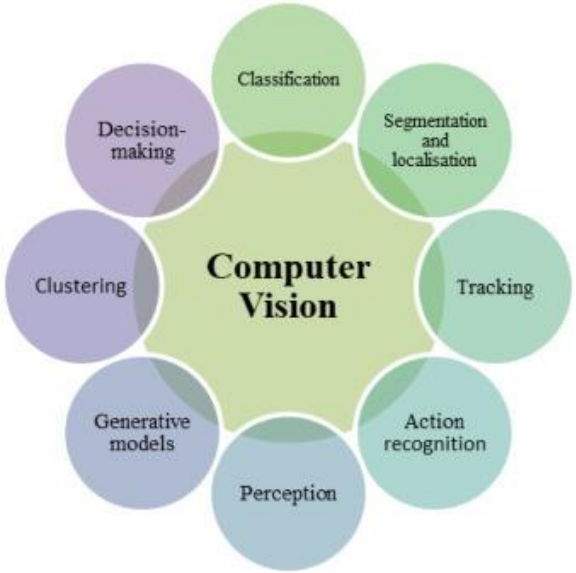
Key Features

A FLEET OF DRONES WILL BE LAUNCHED TO SURVEY A SELECTED AREA

THOSE DRONES WILL USE THERMAL IMAGING CAMERAS TO SCAN THE LANDSCAPE FOR EXCEEDINGLY HIGH THERMAL SIGNATURES

IF A HIGH TEMPERATURE IS DETECTED, THE DRONE WILL ALERT THE OPERATOR OF THE ISSUE SO THEY CAN DISPATCH A TEAM TO EXTINGUISH

Technical Challenges



- Computer vision is more advanced than undergraduate curriculum.
- Courses that can help make decisions with programming are senior level.
- The team does not know which libraries are good for CV besides OpenCV.

Milestone 1

Fully set up Raspberry Pi

Mission Planner

ARDUPILOT

Versatile, Trusted, Open

Choose drone synchronizing simulation software

Choose a thermal camera, and have a way to use its video with OpenCV