
Smart City: Mosquitos and Drones

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Problem Statement:

To eradicate the mosquito breeding grounds by identifying and predicting the most probable places of their occurrence.



Drones vs Mos-quit-os



Action Plan

SURVEY

Drone surveys and captures images of the designated area.

DETECTION

Detect water logged areas using **Colour Segmentation**

ERADICATION

Eradicate identified breeding grounds using **Cinnamon Oil**



SURVEY...

Region of interest is identified and then the drone follows a predetermined path to capture the images of entire region in an efficient manner.

Path Planning



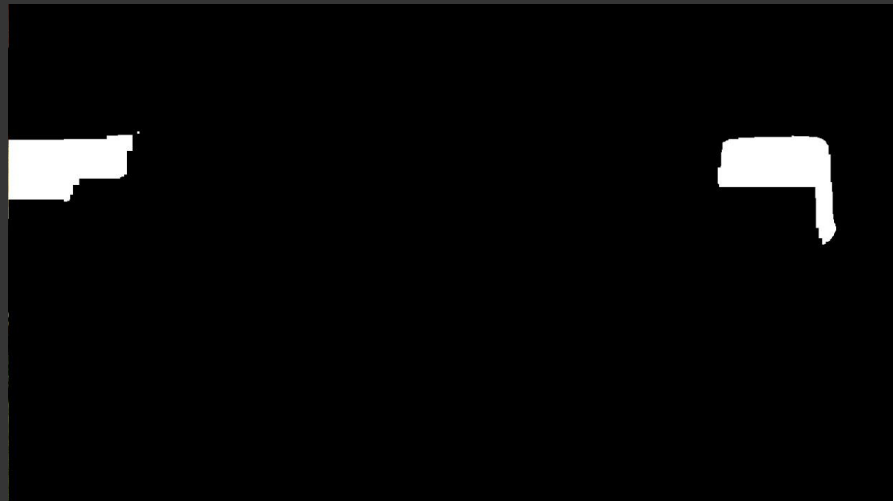
Source: <https://github.com/Microsoft/AirSim/wiki/Implementing-a-Drone-Survey-script>



DETECTION??

At the docking station it runs **Colour Segmentation** technique to identify water logged areas to identify blue-green coloured patches/blobs in the surroundings from aerial photographs of drone. In future, 3D reconstruction of the map can be used to predict water logged areas.

Colour Segmentation





ERADICATION!!!

After identifying the water clogged areas, drone maneuvers to target location and disperses **Cinnamon Oil** in water to kill growing larvae.

Why Cinnamon Oil?

Cinnamon Oil is an all-natural, environmentally-friendly way to kill mosquito larvae.

It provides additional benefit of smelling good and being thrice as effective as other natural agents.



Finally.....

