

Mangrove Classification

Experiment Design for better ground truth in
Mangrove classification

Problem:

We have low certainty of mangrove type with 6 meter resolution from satellites and 10 cm resolution from 50m drone imagery.

ML experiment design proposal:

Geographically coordinate high resolution drone imagery with calibrated gps coordinates that are mapped together in the DB. Image capture at 10 meter altitude will produce 1 cm resolution images that can be mapped to images that contain 10 cm of resolution.

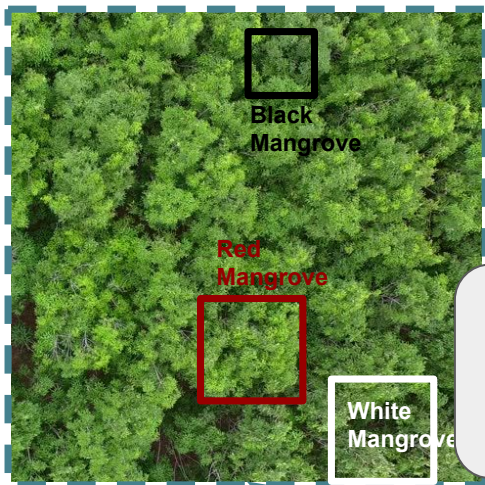
(Note: 10m res is captured at 50 meter altitude this is a much faster process)

We can use DB queries to map and compare classifications from all sources to explore the accuracy of different classification methods such that the high resolution 1cm images act as ground truth.

Aerial Survey image capture at the following altitudes: 50 meters and 10 meters



Human Classification
of Drone Imagery
at 1 cm Resolution



CNN Classification
of Drone Imagery
at 10 cm Resolution



Zoom
in



Mapped
in DB

- GPS: Lat: 20.9123; Long:118.9123
- Species Density
 - Red Mangrove: R%
 - White Mangrove: W%
 - Black Mangrove: B%
 - Other Species: O%
 - Unknown: U%

Satellite image at 6m Res

Mind mapping the ML workflow options...

