

MICHIGAN STATE
UNIVERSITY

Alpha Presentation
ERP Air Force: Conservation
Threat Detection
The Capstone Experience

Team Evolution

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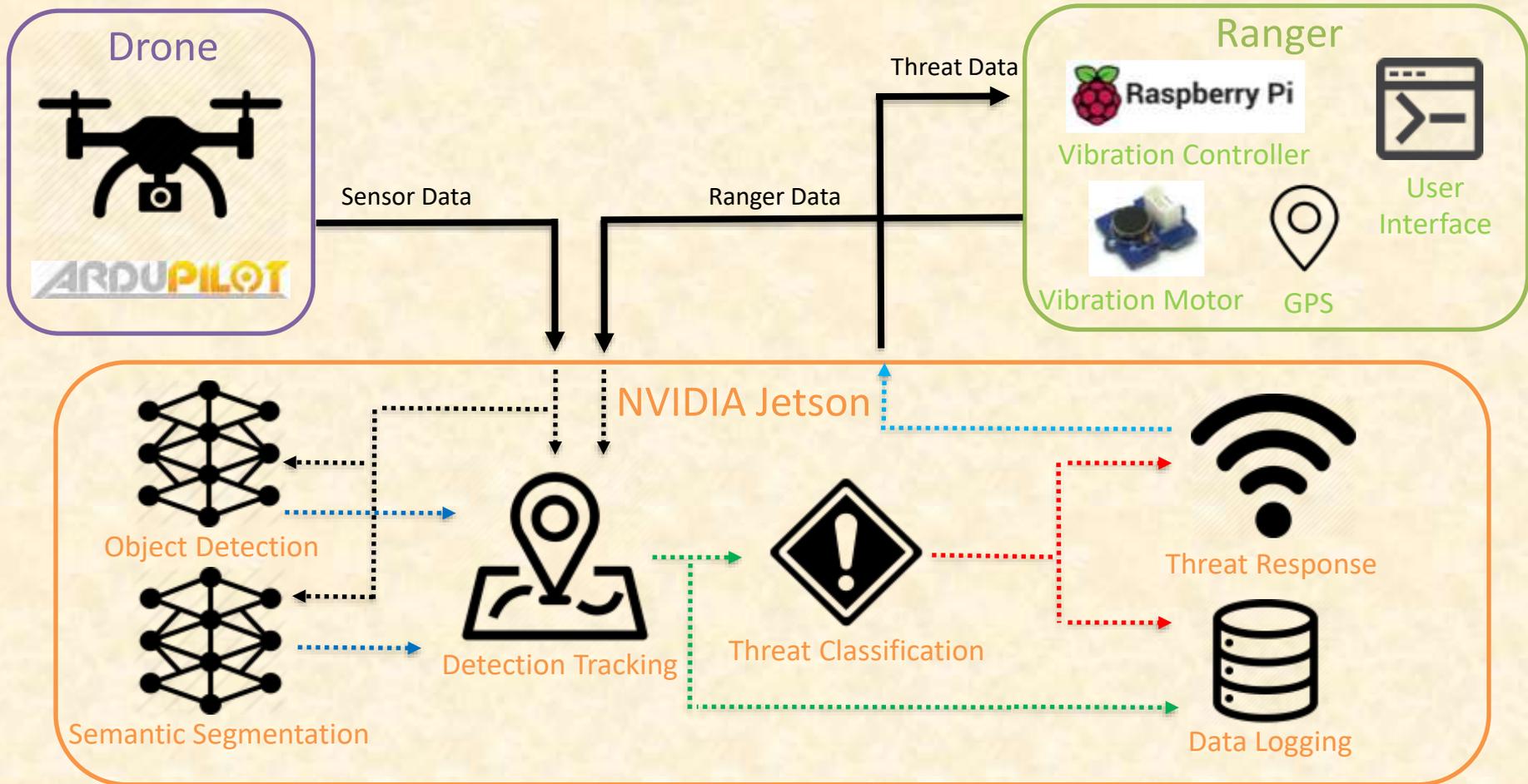
From Students...
...to Professionals

Project Overview

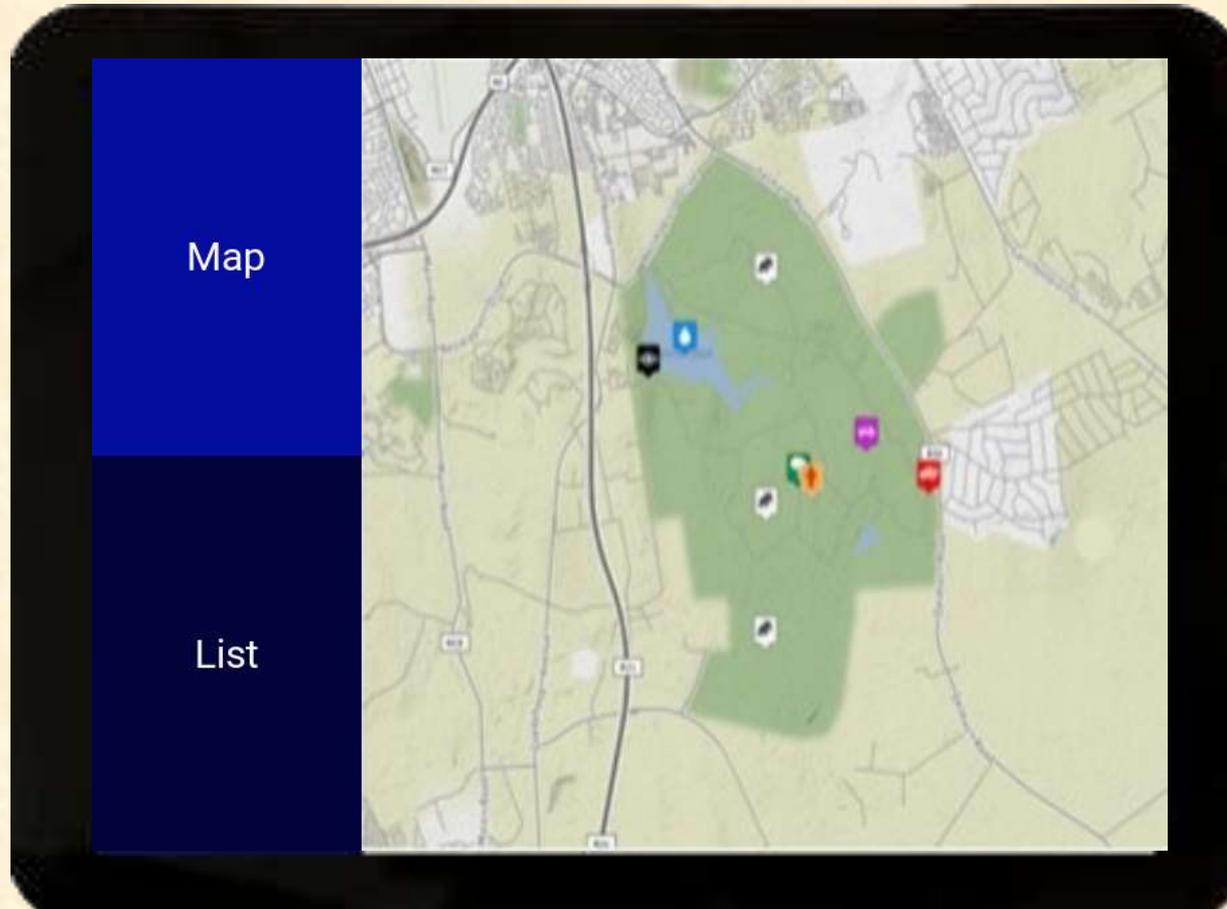
- Protect wildlife in South Africa
- Analyze drone footage
- Classify threats
- Alert rangers
 - Graphical user interface
 - Vibration vest



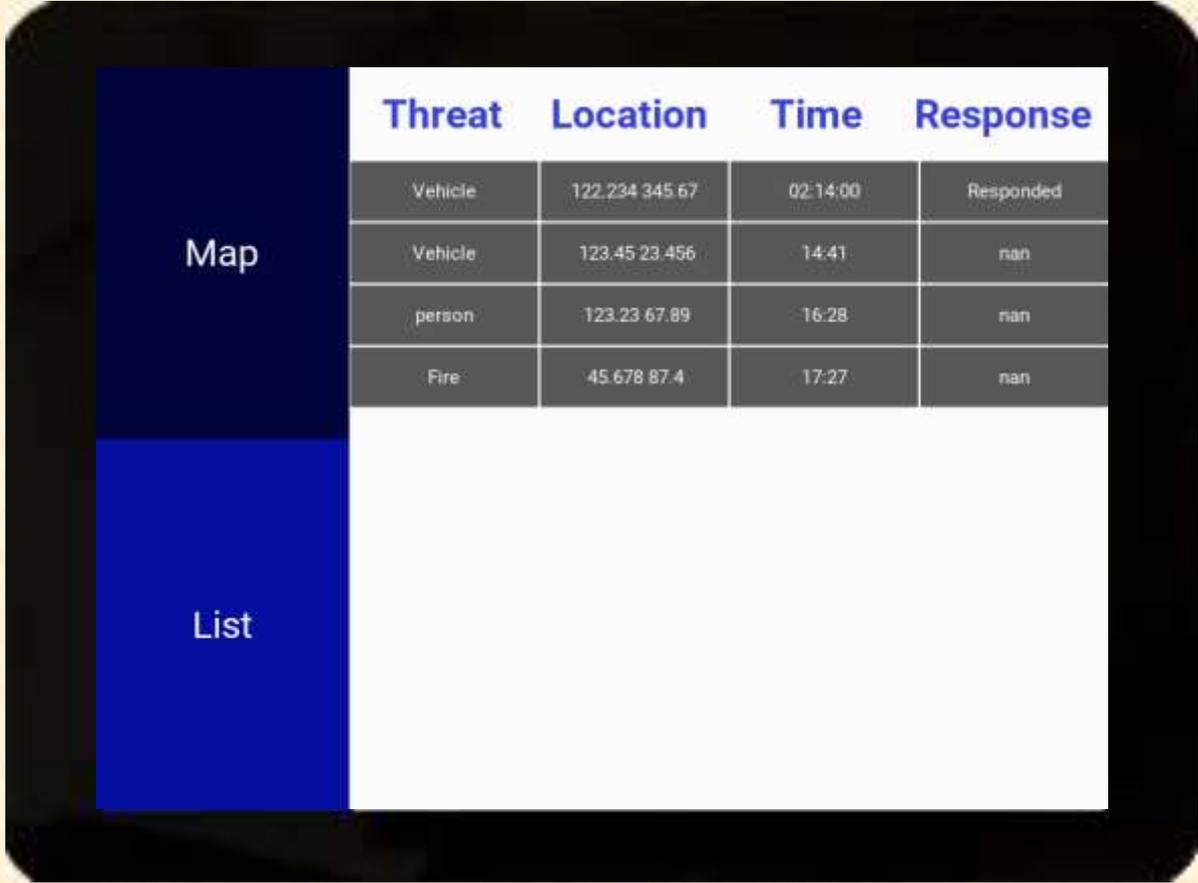
System Architecture



Map View



List View



Threat	Location	Time	Response
Vehicle	122.234 345.67	02:14:00	Responded
Vehicle	123.45 23.456	14:41	nan
person	123.23 67.89	16:28	nan
Fire	45.678 87.4	17:27	nan



Threat View



Vehicle
172.345, 68.456
2:30pm

Respond

Monitor

Ignore

The image shows a user interface for a 'Threat View'. On the left, there is an aerial photograph of a blue car on a dirt road. Below the photo, the text 'Vehicle' is followed by the coordinates '172.345, 68.456' and the time '2:30pm'. On the right side of the interface, there are three blue buttons stacked vertically, labeled 'Respond', 'Monitor', and 'Ignore'.



Fire Detection



What's left to do?

- Train on South African environment data set
- Map roads and trails of park in South Africa
- Map threats from images into real world coordinates
- Tracking and classification of threats
- Integrate connectivity to front end



Questions?

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