

**MICHIGAN STATE**  
**UNIVERSITY**

# Alpha Presentation

## ERP Air Force: Conservation Threat Detection

### The Capstone Experience

Team Evolution

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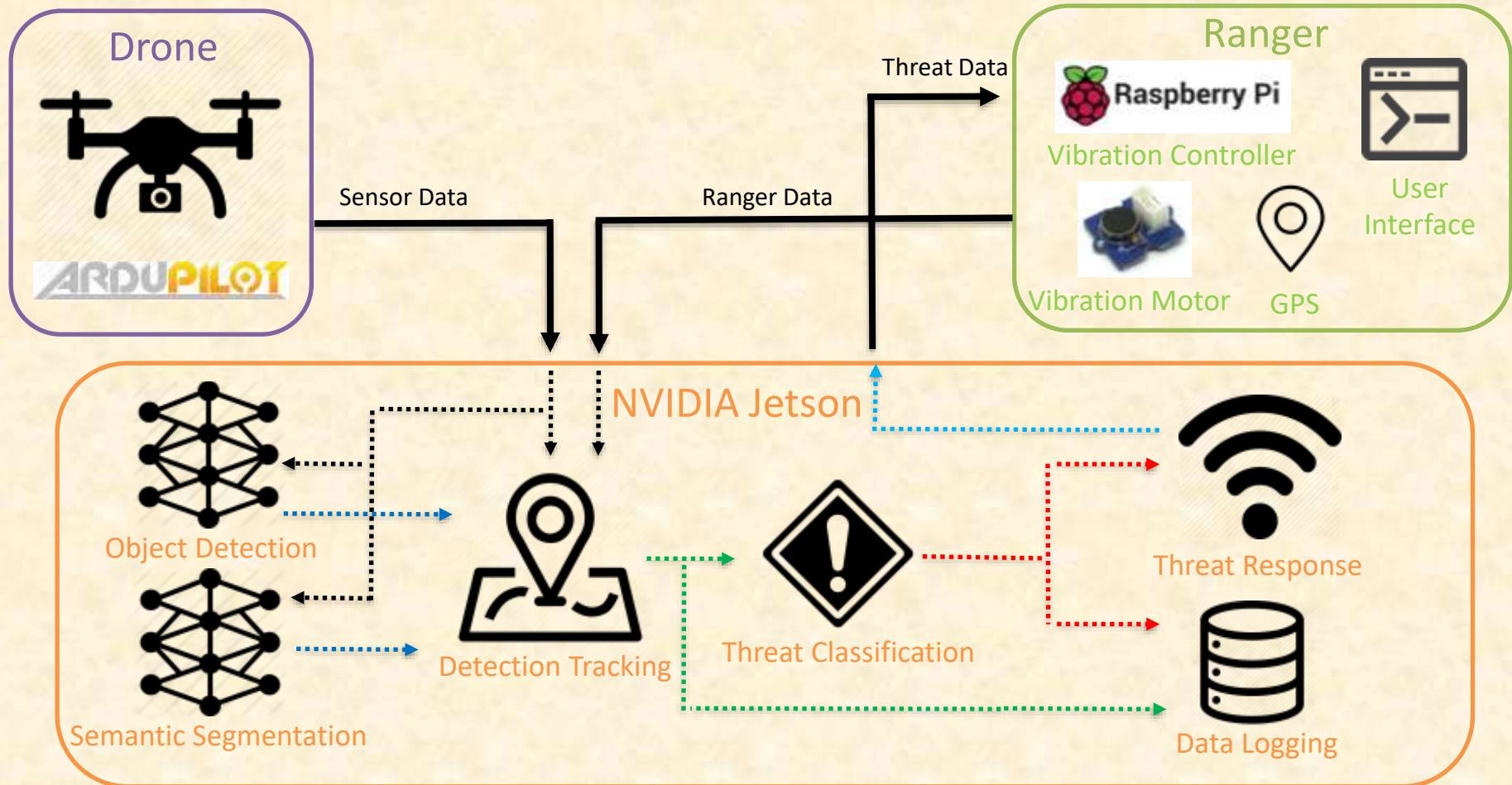
*From Students...  
...to Professionals*

# Project Overview

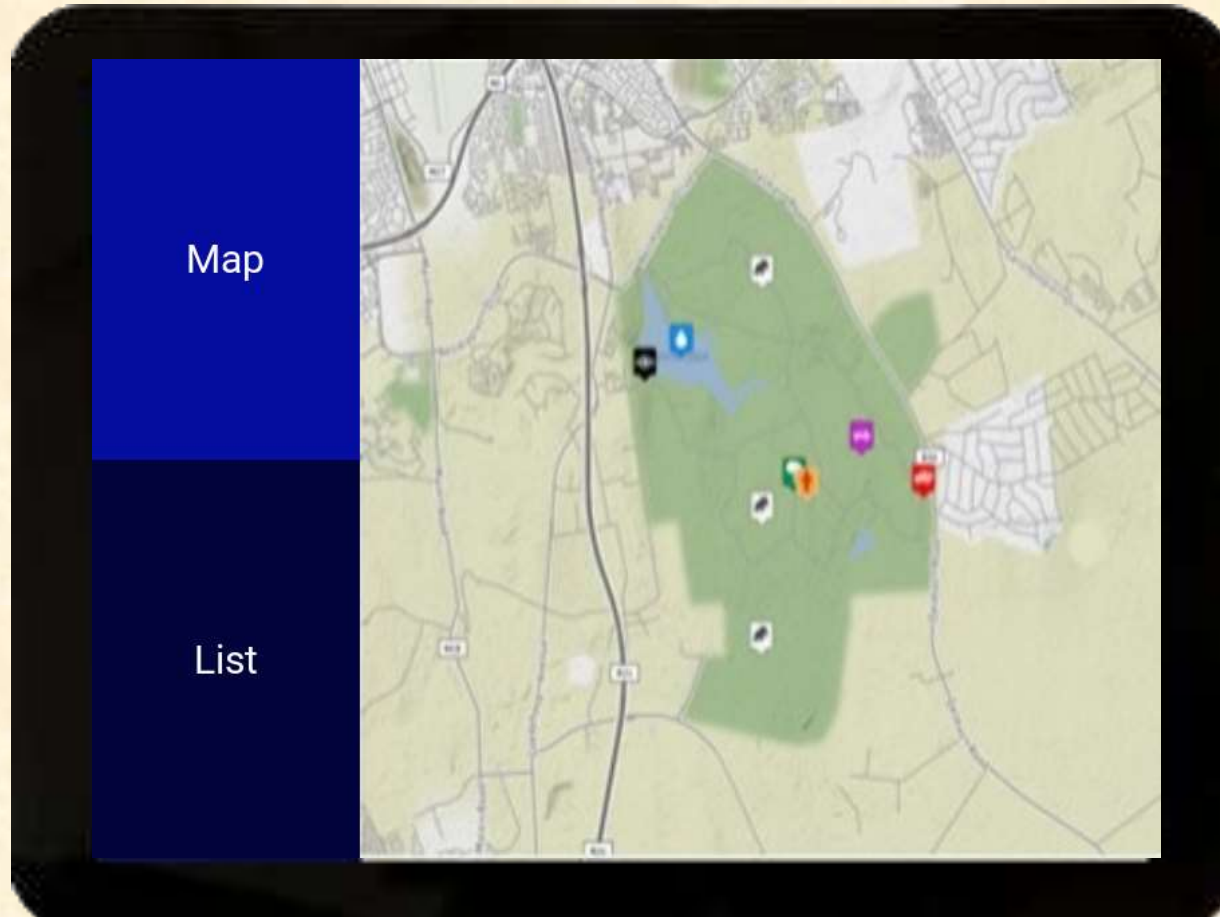
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- Protect wildlife in South Africa
- Analyze drone footage
- Classify threats
- Alert rangers
  - Graphical user interface
  - Vibration vest

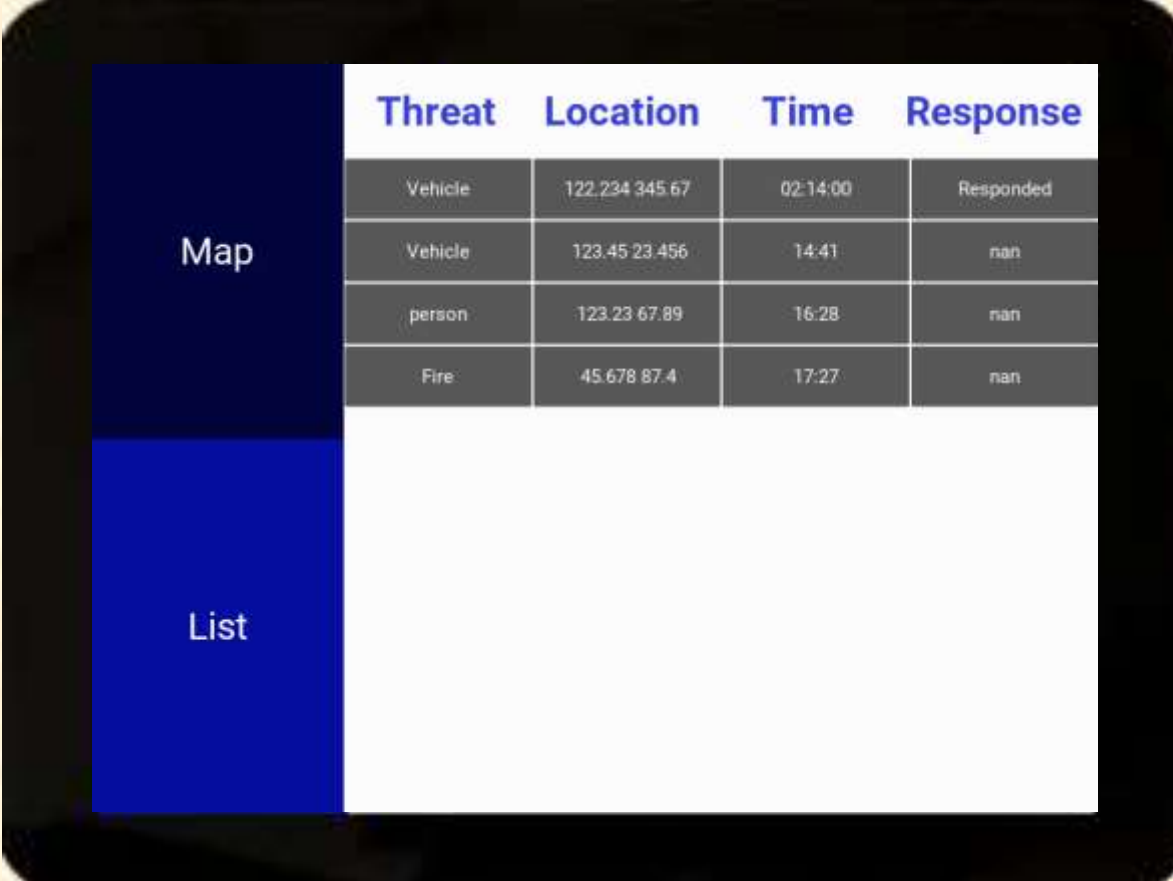
# System Architecture



# Map View



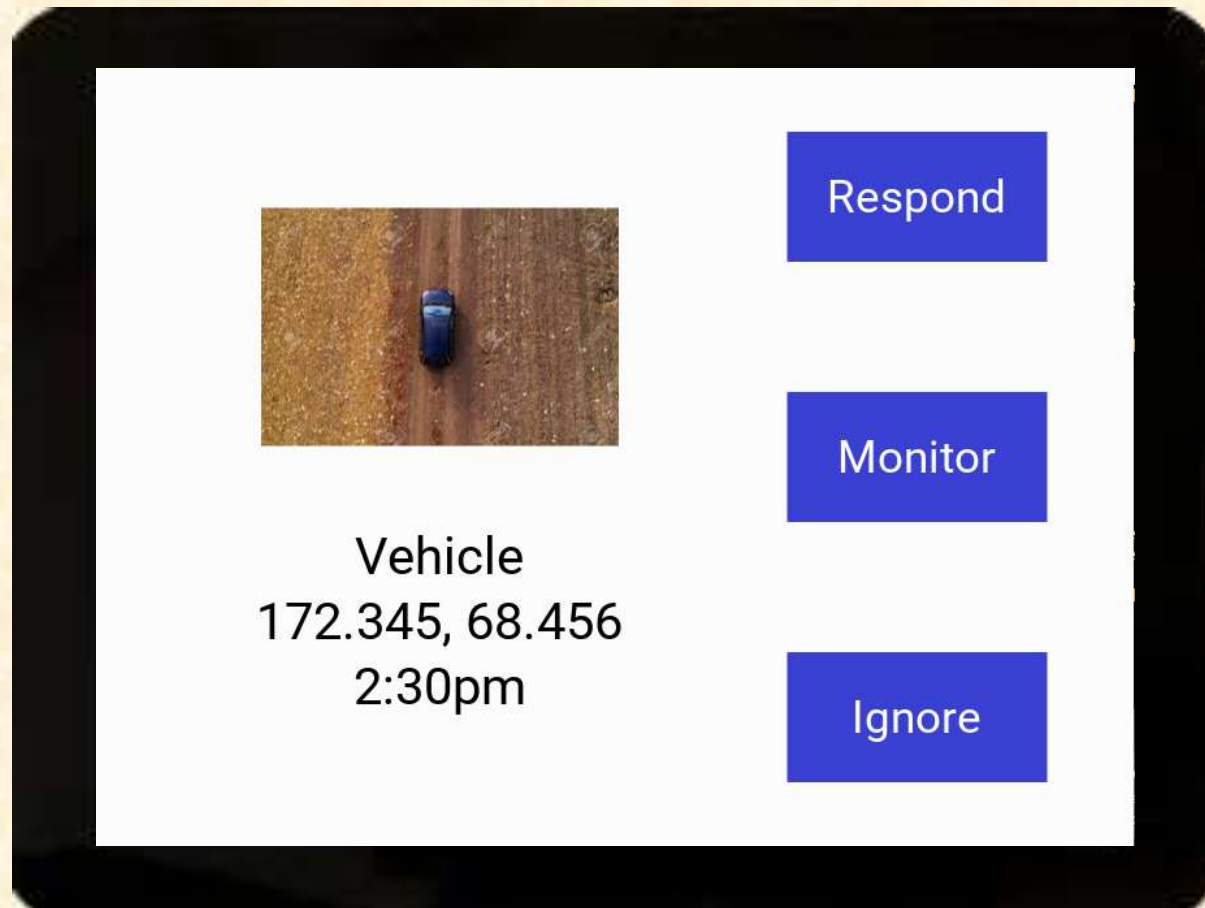
# List View



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



# Fire Detection



# What's left to do?

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- 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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