

MICHIGAN STATE
UNIVERSITY

Beta Presentation

ERP Air Force: Conservation

Thread Detection

The Capstone Experience

Team Evolution

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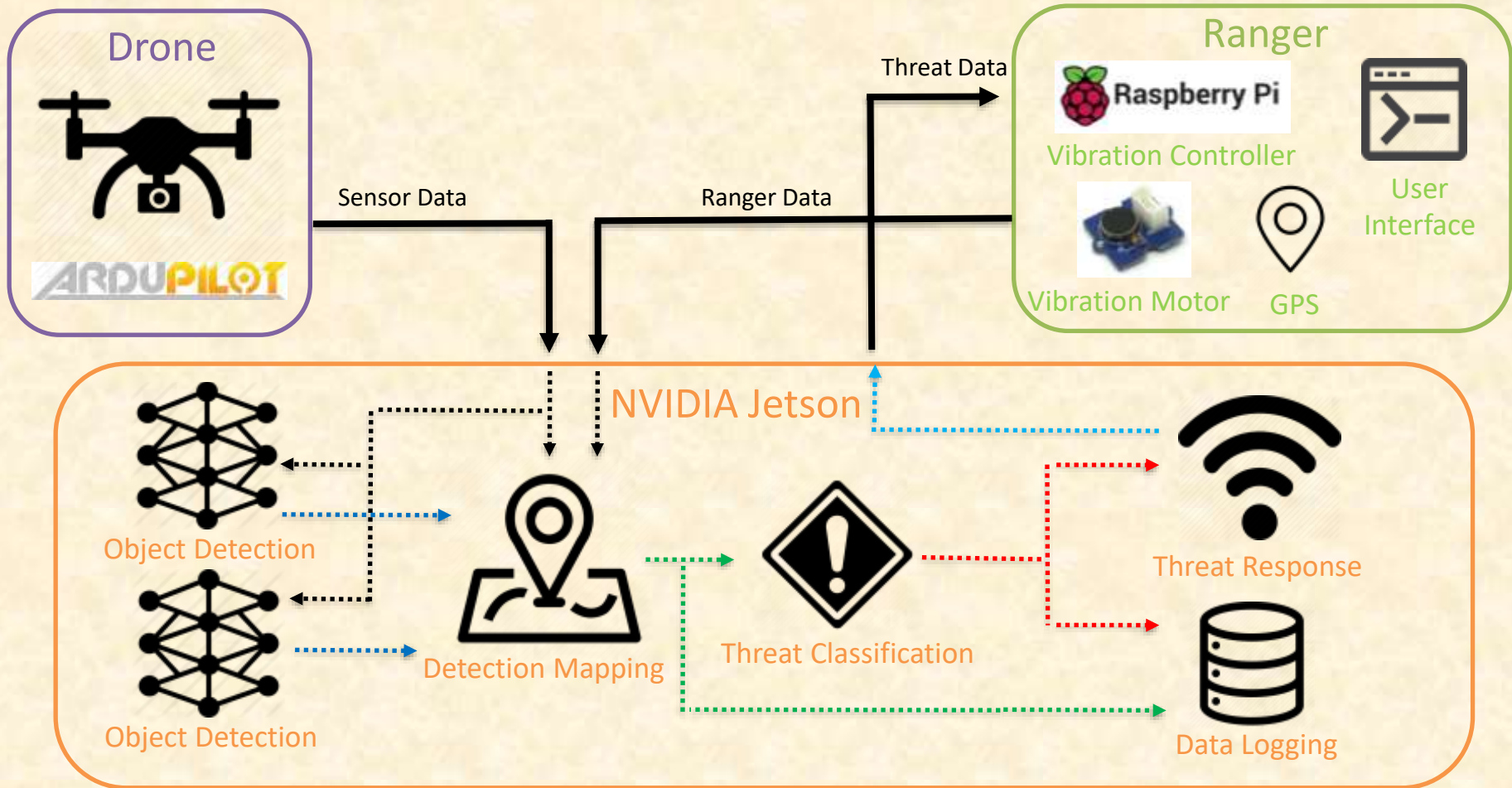
*From Students...
...to Professionals*

Project Overview

- Protect wildlife in South Africa
- Analyze live drone video
- Find and classify threats
- Alert rangers
 - Graphical user interface
 - Vibration vest

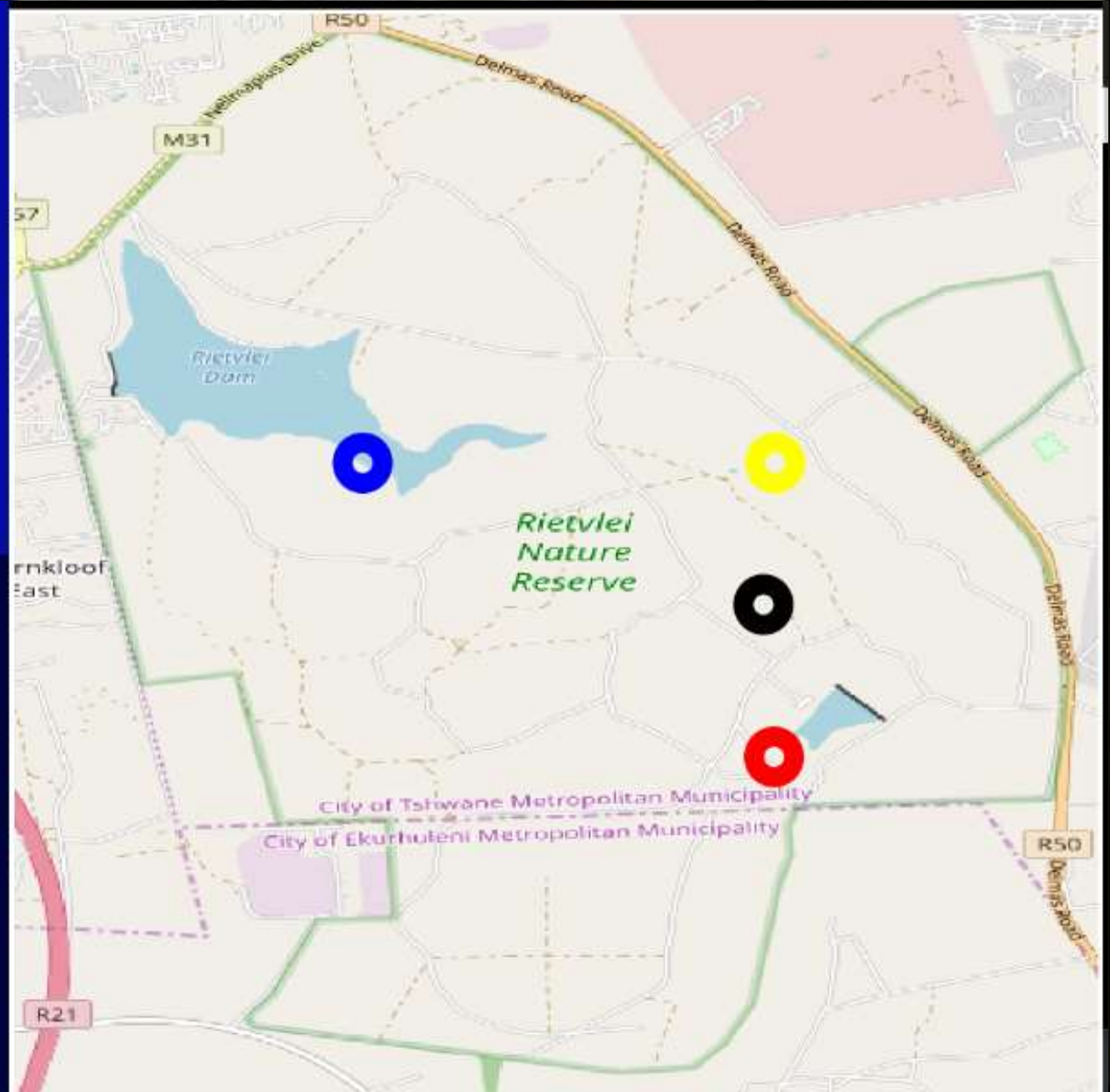


System Architecture



Map

List



Map

List

| Threat | Location | Time | Response |
|--------|----------|------|----------|
|--------|----------|------|----------|

| | | | |
|----------|------------------|-------|-------------|
| Elephant | -25.9111 28.3123 | 12:33 | No Response |
|----------|------------------|-------|-------------|

| | | | |
|---------|------------------|-------|-------------|
| Vehicle | -25.9101 28.3004 | 15:25 | No Response |
|---------|------------------|-------|-------------|

| | | | |
|-------|-----------------|-------|-------------|
| Flood | -25.876 28.3123 | 14:49 | No Response |
|-------|-----------------|-------|-------------|

| | | | |
|------|------------------|-------|-------------|
| Fire | -25.9110 28.2876 | 22:28 | No Response |
|------|------------------|-------|-------------|

Return



Respond

Monitor

Ignore

Vehicle
-25.9101 28.3004
15:25

Fire Detection



What's left to do?

- Documentation of components
- Tune mapping and tracking for high tilt images
- Find altitude range of consistent detection of each type of threat
- Provide easy interface to update trail and road map of park
- Update UI color scheme, add logo



Questions?

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