MICHIGAN STATE UNIVERSITY

Alpha Presentation

[ERP Air Force: Drone Elephant Recognition and Tracking]
The Capstone Experience

Team Evolution

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Project Overview

• ERP is founded to preserve and protect South Africa’s Elephants
  ▪ Drones
  ▪ GPS Collars

• The goal of our project is to help ERP analyzing their daily data
  ▪ Auto-identify Elephants form drone footage
  ▪ Inform rangers where to search for Elephants
Project Overview
System Architecture

- Footage
- YOLOv3
- Detection
- GPS Database
- Python + Flask API
- VueJS UI
- GPS Location
- Feature Extractor
- RNN
- GPS Prediction
The Dashboard
Elephant Video Viewer
Elephant Detections
GPS Prediction Map
GPS Prediction Accuracy

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What’s left to do?

- Build out functionality of Dashboard
- Expand the dataset
- Integrate GPS prediction to Dashboard
- GPS feature selection optimization
Questions?