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

trainingData/tracker_data_2018.csv_African Elephant: 1221195

Predicted coordinates
Actual coordinates
What’s left to do?

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