

# Florida Wildcats: Bobcats and Panthers

Camera Trap Image Classification

# Overview

Goal

Background

Model

Future Steps



# The Goal:

Binary Image  
Classification from  
Camera Tract Images

- Corkscrew Swamp
- Okaloacoochee Slough State Forest



# Bobcats

- 2.5 - 3 ft long
- 1.5 ft tall
- 12 - 28 lbs
- Reddish-Brown Fur  
with Spots
- Short Pointed Ears
- Short 'Bobbed' Tail



# Panthers

- 7 - 8 ft long
- 2.5 ft tall
- 60 - 160 lbs
- Light to Dark Tan
- Endangered



# Feline Leukomyelopathy (FLM)



Microscopic changes  
in the brain and spine,  
causing varying  
degrees of rear leg  
weakness and difficulty  
walking

# Example of Feline Leukomyelopathy (FLM)



# Challenges



# Other Classification Challenges

## Misclassification Examples



# Model



The Better Model:

ResNet502V

On Test Set

Accuracy: 82%

Recall: 84%

Precision: 81%

# ResNet502V Model Disadvantages

On Test Set

Accuracy: 82%

Recall: 84%

Precision: 81%

On New Images

Accuracy: 68%

Recall: 63%

Precision: 71%

# Future Steps



Model Retraining

Dataset Filtering



Visit Florida Fish and Wildlife  
Conservation Commissions for  
updates

[Updates | FWC](#)

# Sources

[Land Mammals - Florida Panther | FWC](#)

[Land Mammals - Bobcat | FWC](#)

[Bobcat Population Status and Management in North America: Evidence of Large-Scale Population Increase](#)

[Florida Panther - Endangered Species Coalition](#)

[Florida Wildlife Camera Trap Dataset – Center for Research in Computer Vision](#)

## Image Credits

[Visit Corkscrew Swamp Sanctuary](#)

[Okaloacoochee Slough State Forest](#)

[Unsplash](#)

[Florida Wildlife Camera Trap Dataset – Center for Research in Computer Vision](#)

<https://www.youtube.com/watch?v=nXAFvsrr6dE&t=2s>

