The background of the slide features a dense, stylized illustration of a tropical forest. Large green trees with various leaf patterns, including palm-like fronds and broad leaves, dominate the upper half. In the lower-left foreground, there's a calm body of water with a few green lily pads and white flowers. The overall color palette is a vibrant green gradient.

Taï National Park: Using Machine Learning to Enhance Multi-Image Classification*

*For academic purposes only. I am not affiliated with Taï National Park.

About Me

- **Hometown:**
 - Columbia, Missouri
- **Education: University of Missouri**
 - Bachelor of Science in Business Administration
 - Master of Business Administration
- **Hobbies:**
 - Reading Science Fiction and Fantasy
 - Building computers
 - Playing board games



Mackoy Staloch
GitHub: MackoyS

Agenda

Business Objective

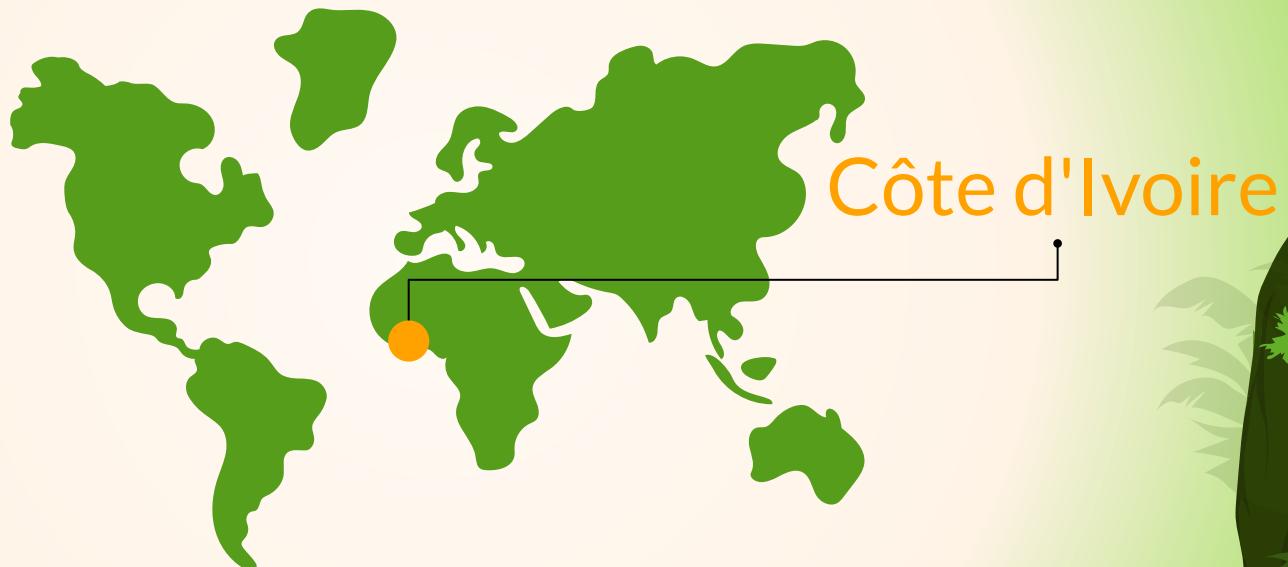
Data Analysis

Future Steps



Recommendations

Taï National Park: One of the Last Major Rainforests in West Africa

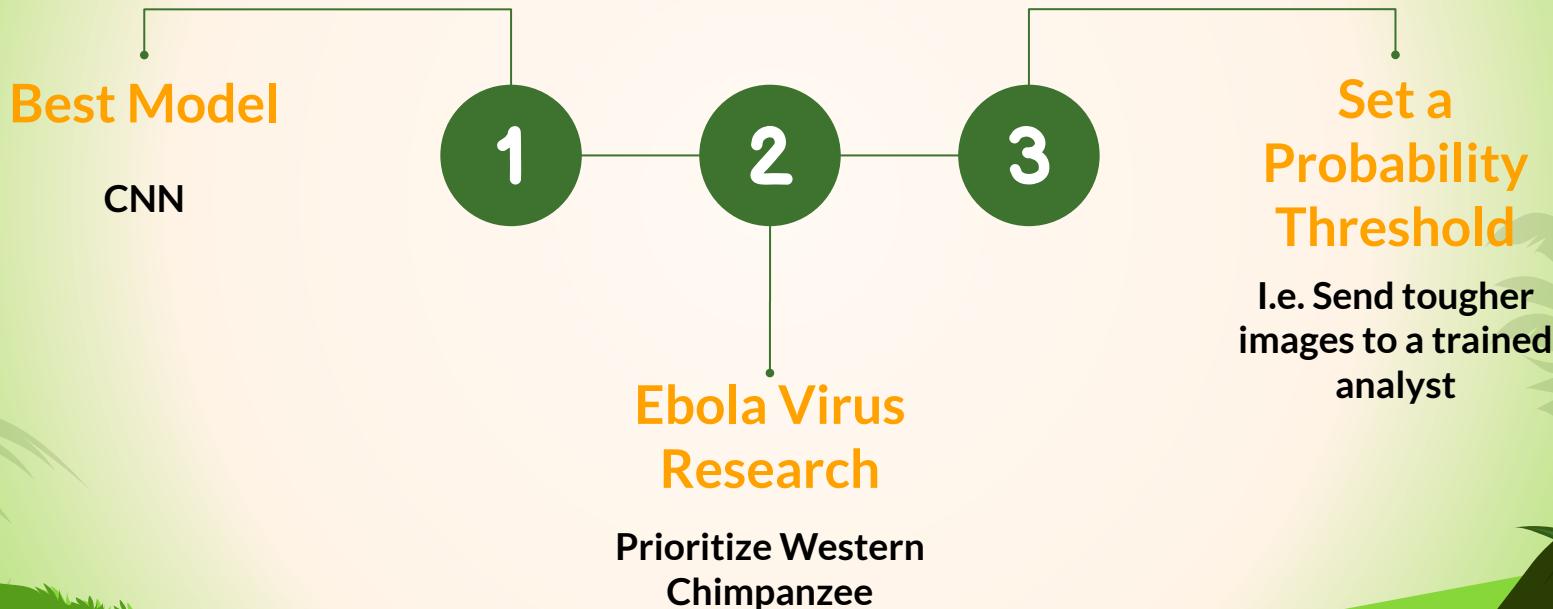




Business Objective: Image Classification



Main Findings

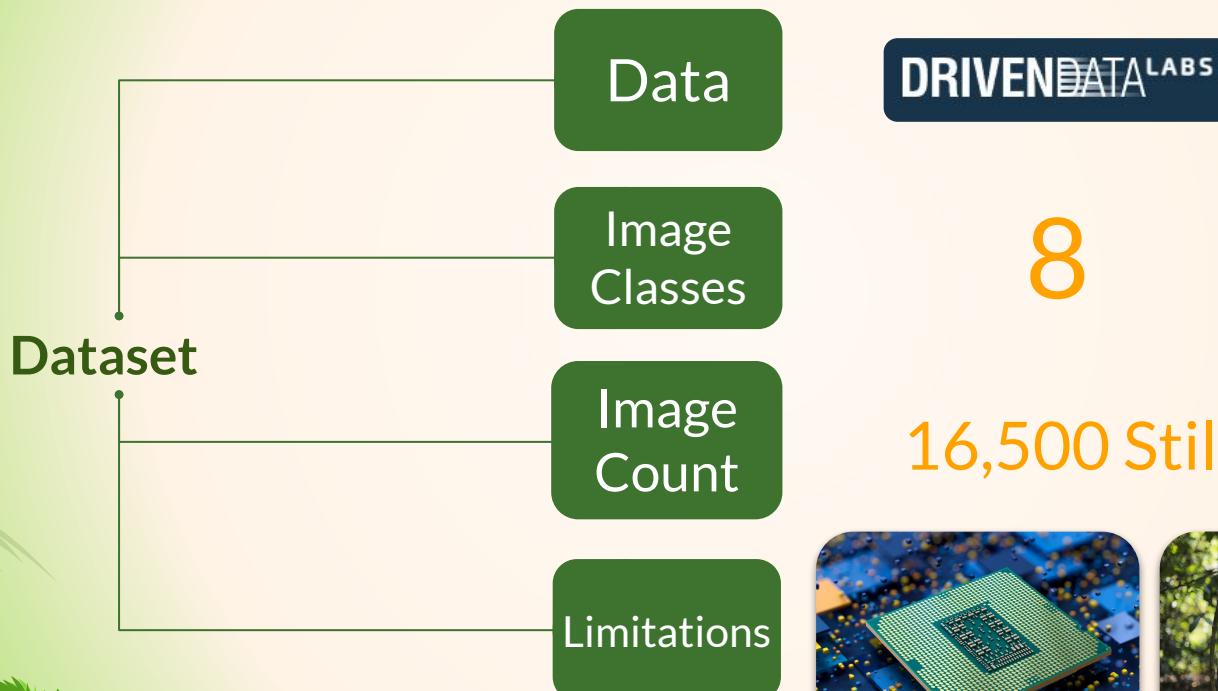


Data Analysis

- Data Overview
- Animals of Tai National Park
- Image Examples



Data Overview



Animals of Taï National Park



Antelope Duiker



Dwarf Bittern



Civet Genet



Nolan Hog



Leopard



Western Red Colobus

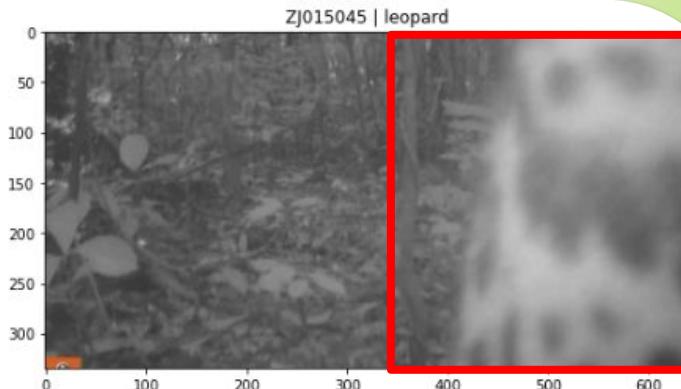
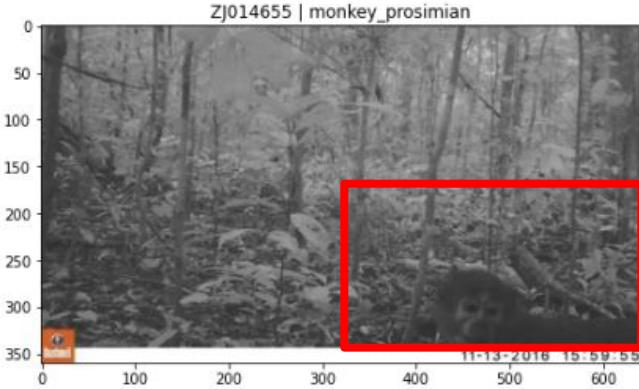


Greater Cane Rat

Camera Trap Image Examples



Camera Trap Image Examples



Model Analysis and Evaluation

- Model Scoring
- Model Evaluation
- Recommendations
- Future Steps



Model Scoring: Accurately Identifying Image Classes



Accuracy

Model Evaluation: 86% Overall Accuracy

Baseline



15%

First Model



67%

Final Model



86%

First Model Eval: 67% Overall Accuracy



39%
Accurate

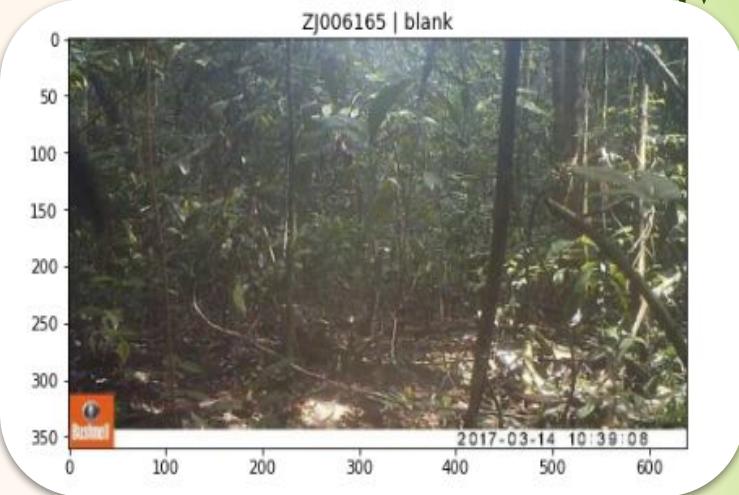


91%
Accurate

Final Model Eval: 86% Overall Accuracy

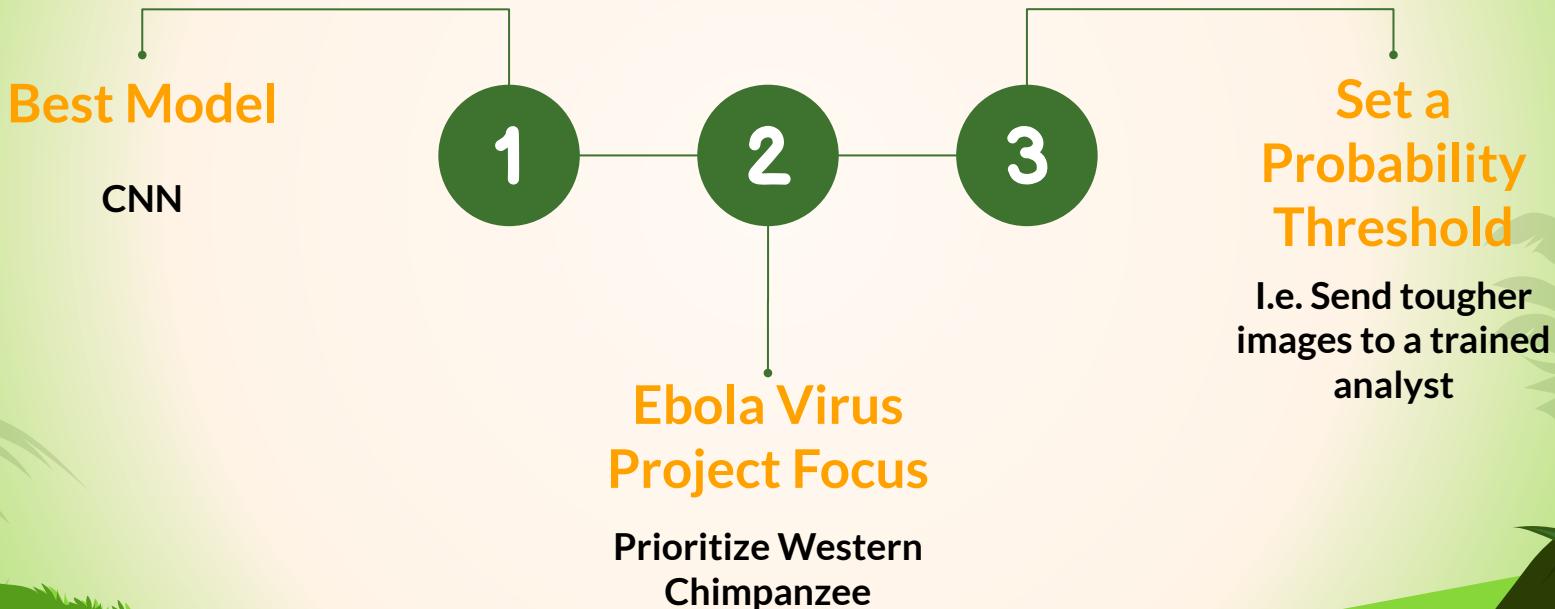


76%
Accurate



95%
Accurate

Main Findings



Future Steps



Adding
Animals



Analysis for
moving images
/ videos



Tracking
Patterns

Thank you! Q&A Box in Zoom



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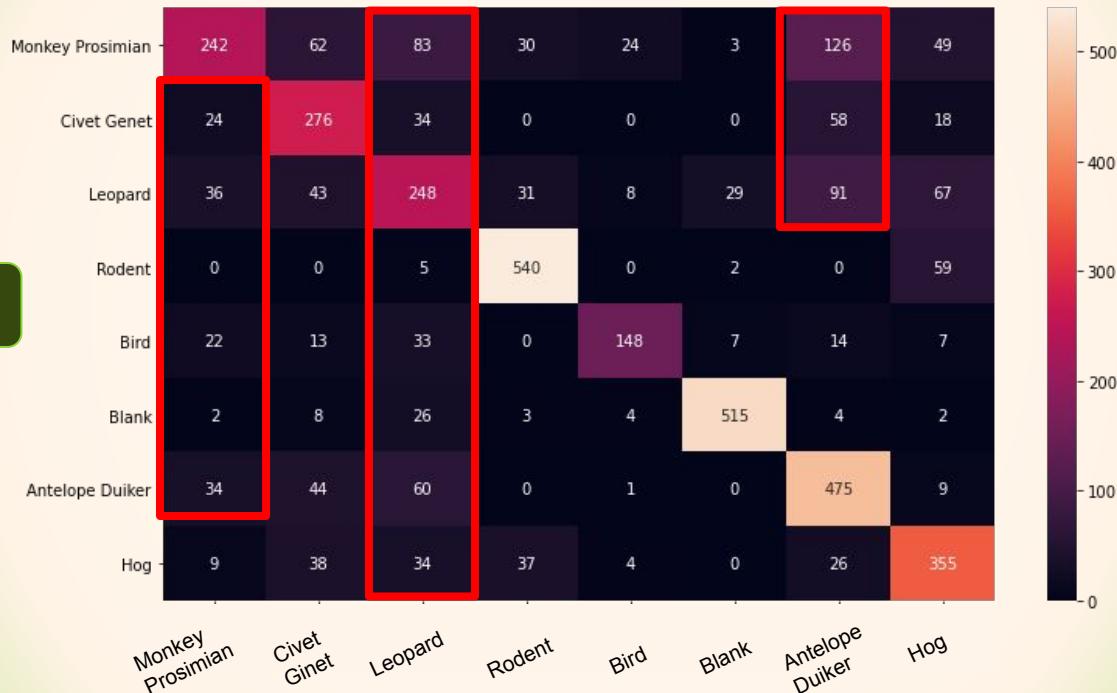
Questions

(Please direct message me in Zoom or email me at
mackoy.staloch@gmail.com)

Appendix

1. <https://slidesgo.com/theme/the-jungle-agency-infographics#search-jungle&position-6&results-6&rs=search>
2. https://wwf.panda.org/discover/our_focus/wildlife_practice/camera_traps/questions/b
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15. <https://www.afro.who.int/news/cote-divoire-declares-first-ebola-outbreak-more-25-years>

Model Aspects - First Model



Predicted

Model Aspects - Final Model



Predicted

Main Findings

