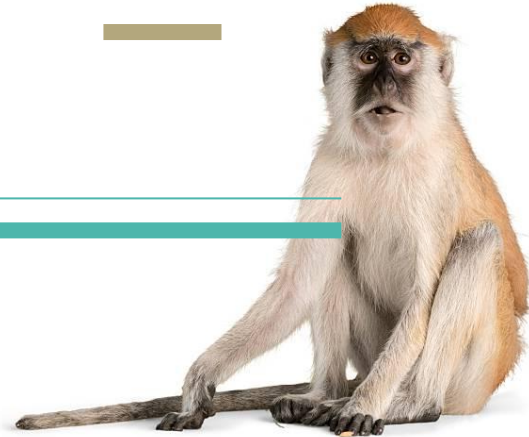




Monkey Species Classification

Mengyu Jackson



Summary



- Business Problem
- Data
- Approach
- Results
- Conclusions

Business Problem



- Identify monkey species in wildlife photos
- Different species have different risks
- Help conservation groups allocate resources
- Low cost training/inference

Data



- Small monkey dataset (~130 images per species for 10 species)
- Augmented with ~200 wildlife images with no monkeys

10 monkey species:

<https://www.kaggle.com/slothkong/10-monkey-species>

Oregon Wildlife:

<https://www.kaggle.com/virtualdvid/oregon-wildlife>

Approach



- Transfer Learning (adapt an existing image classification model)
- Base model trained on ImageNet: very large high quality standardized dataset with 1000 categories

Results



- Fast Training Time
- 99+% accuracy
- 1 mislabeled image in test set

The Confused Classes

Bald Uakari



Silvery Marmoset



The Mislabeledled Monkey

- White Bald Uakari Monkey
- Labelled Silvery Marmoset





Bald Uakari | National Geographic
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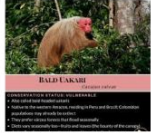
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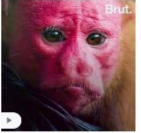
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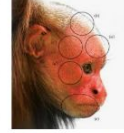
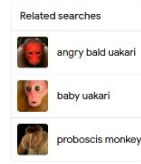
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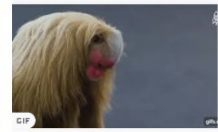
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View of a Bald Uakari monkey in trees ...
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The endangered Bald Uakari Mon ...
reddit.com



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alamy.com



Conclusions



- Very low data requirements
- Extremely high accuracy
- Fast training time

Thank You For Watching!

~ Mengyu Jackson ~

