

Testing artificial intelligence's ability to identify elephants and open gates to facilitate elephant movement

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Intro

- ❑ Enclosed with fences¹
- ❑ Restricts movement of elephants and too small²
- ❑ Large impact on vegetation and break fences³
- ❑ Solutions?⁴
- ❑ AI controlled elephant gates



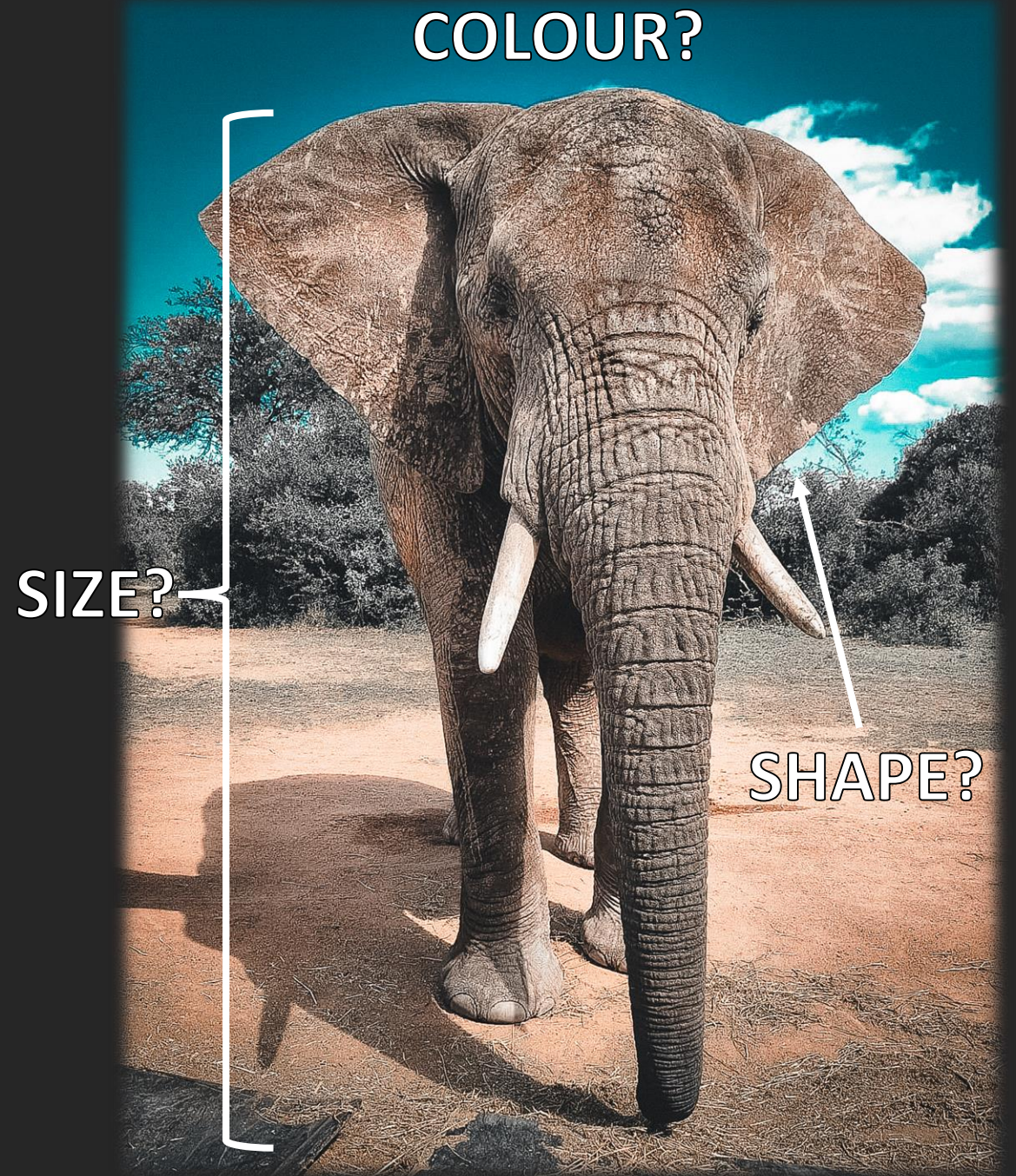
Aims & Predictions

- ❑ Test elephant ID efficiency
- ❑ ID specific features AI uses
- ❑ Will ID elephants correctly
- ❑ Use a combo of features if trained well



Methods

- ❑ Adventures with Elephants
- ❑ Elephants
 - Single/Herd
- ❑ Vehicles
 - Vehicle only



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Methods

Other herbivores

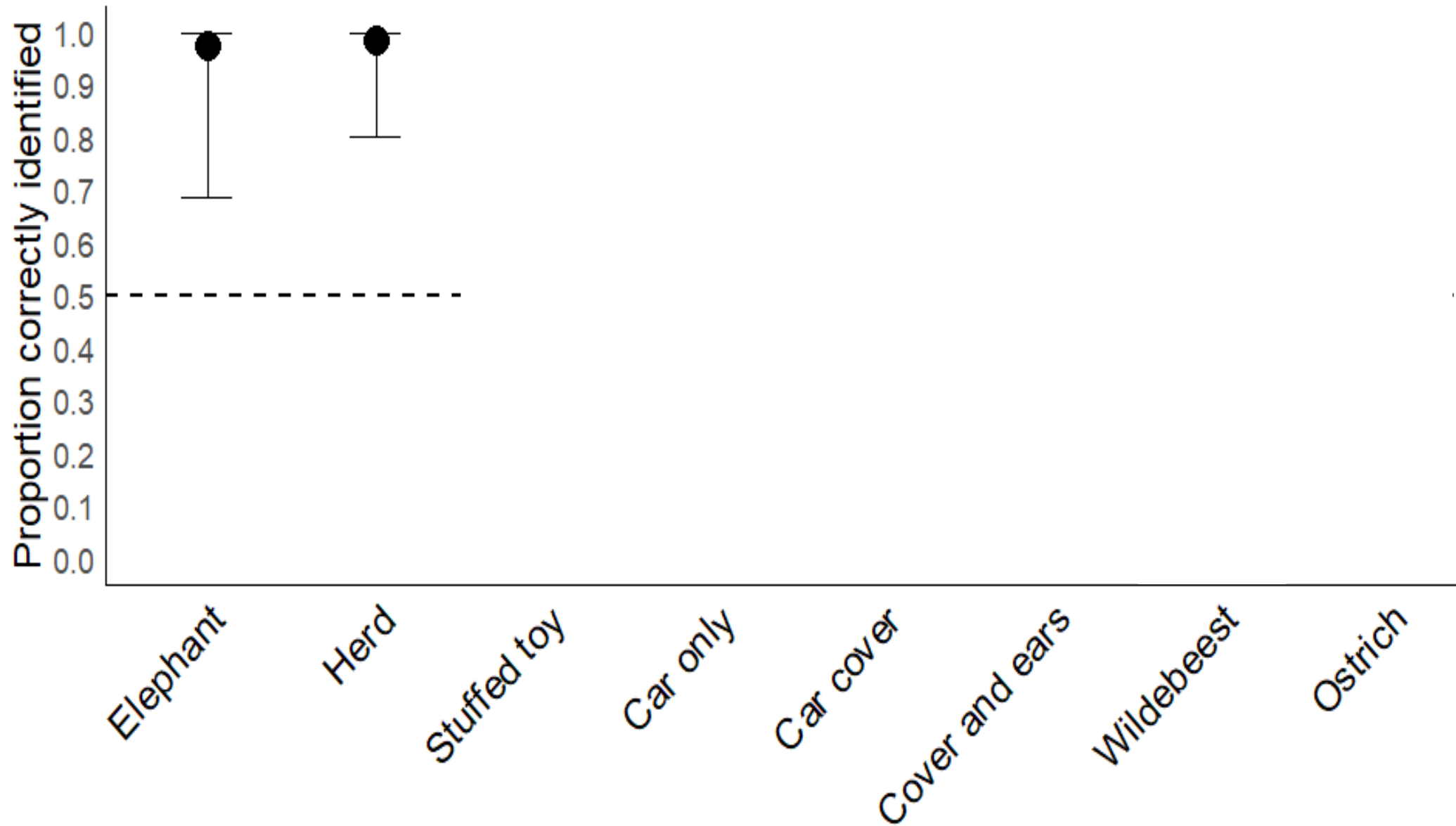
- Wildebeest
- Ostrich

Statistical analysis

- Logistic regression
- Binomial family
- Logit link



Results



Discussion

- ❑ Accurate with elephants, but not others
 - Key off Size + Colour
- ❑ Stuffed toys showed size matters
- ❑ Confused by Wildebeest and Ostrich?
 - Pixel area occupied



Ostrich



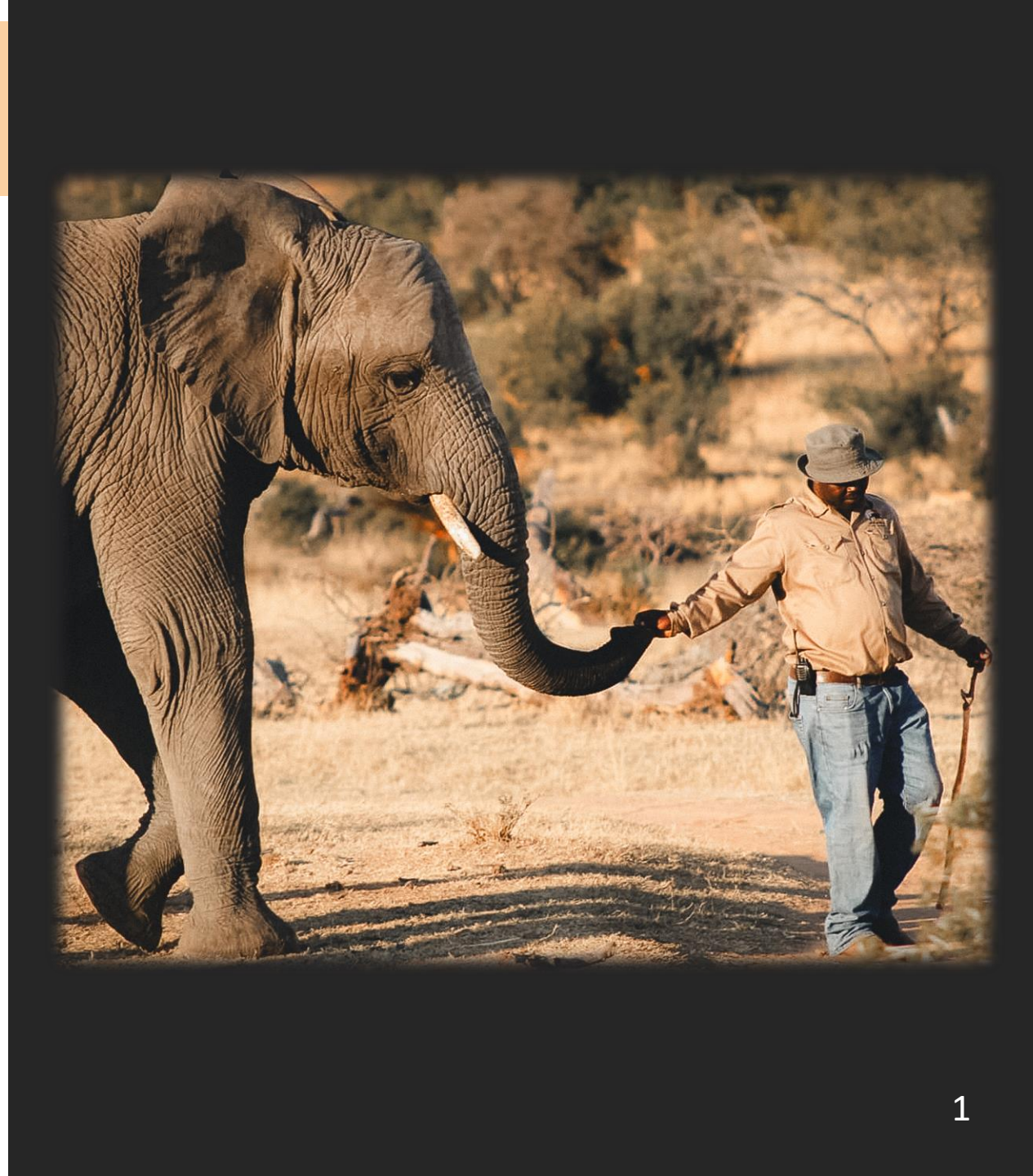
Elephant



Wildebeest

Discussion

- ❑ Will open the gate for large, grey animals
- ❑ Reduce errors
 - diverse training,
 - Finer detail recognition
- ❑ Further testing
 - weather, time of day, lighting



Discussion

- Allow free movement
 - Reduce pressure
- Refine and responsible deployment
 - New tool for conservation





Thank you!

