Crowdsourcing, computer vision, and data science for ecology and conservation

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From pixels to science and conservation
AI: Find animals, identify individuals

Who is this?

Zippy the Zebra!

Database of thousands
Form new collaborations!

- Population count
- Birth/death dynamics
- Species range
- Social interactions
- Species interactions

Collaborating Researchers (click each to learn more)

Jason Holmberg  Brad Norman  Dani Rob  Aisleen Dilsks
Flukebook helps you study, identify and protect marine mammal populations!
Nairobi National Park
Mar 1-2, 2015

10,000+ images
75 photographers
31 cars
and
1 school bus from Kibera
First ever full species census using photos from citizens

Jan 30-31, 2016
hundreds of people
45 locations
90,000+ images
90%+ of zebra species
We can go further!

Biodiversity of the world through the lenses of individual cameras

- Massive mining of social media
- More species, more animals (facial recognition? Insects?)
  - Thermal signatures?
  - Under water (coral reefs)
    - Plants
    - Habitats
    - Weather

... and microphones

- whale songs and bird calls
- species compositions

... and?
AI for

Science

Conservation

Public engagement

At large scale and high resolution over space, time, and individuals
...engaging researchers and volunteers around the globe...