



A computer vision for animal ecology

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What and Why?

- ▶ Ecologists aim to observe species in the wild, and computer vision is a tool that can greatly aid in everything relating to image review
- ▶ The goal is to create a deep learning model that can recognize the species of an animal by a photo
- ▶ I'm tackling this problem as combining computer vision with classification is very interesting to me
- ▶ Additionally, it will be interesting to see what sort of patterns computers are able to detect in wildlife while also growing skills in computer vision

Survey of Other Works

- ▶ A review of deep learning algorithms for computer vision systems in livestock (2021)
 - ▶ Reviewed usage of Deep Learning for classification and segmentation tasks relating to animals
 - ▶ Reviews topics such as Convolutions, Deconvolutions, Pooling, Recurrent, and Dense layers
- ▶ Animal classification using facial images with score-level fusion (2018)
 - ▶ Introduced me to Kernel Fisher Analysis (KFA) for feature extraction for both classification and object recognition

