UDACITY

Data Annotation Plan

Sgambati ‘24





Identifying Birds

Identify the species of a bird using an image

Goal: Identifying “Birds”

Figure out what the image is, and what the species of the animal is.



Identify Relevant Features

Figure out what the image is, and what the species of the animal is.

Allen’s Hummingbird (So. Cal Local Bird)



- Beak closed
- Feathers
- Tail
- Feet
- Eyes

Overall:
- Texture
- Shape

Identify Relevant Features

Determine what features are most relevant to training your model

Open Source Option:
Unsplash for a range of open-source bird photography.

Self-Collected Images:
Use your own media or set up a feature for users to upload their own images.

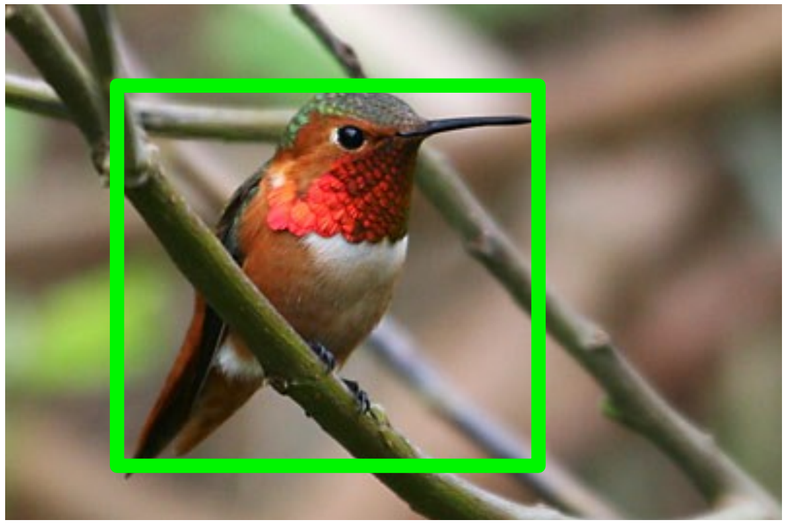
Licensed Options:
Connect with local societies for licensed bird photography.

.

Label every bird in the image

Figure out what the image is, and what the species of the animal is.

Allen’s Hummingbird (So. Cal Local Bird)





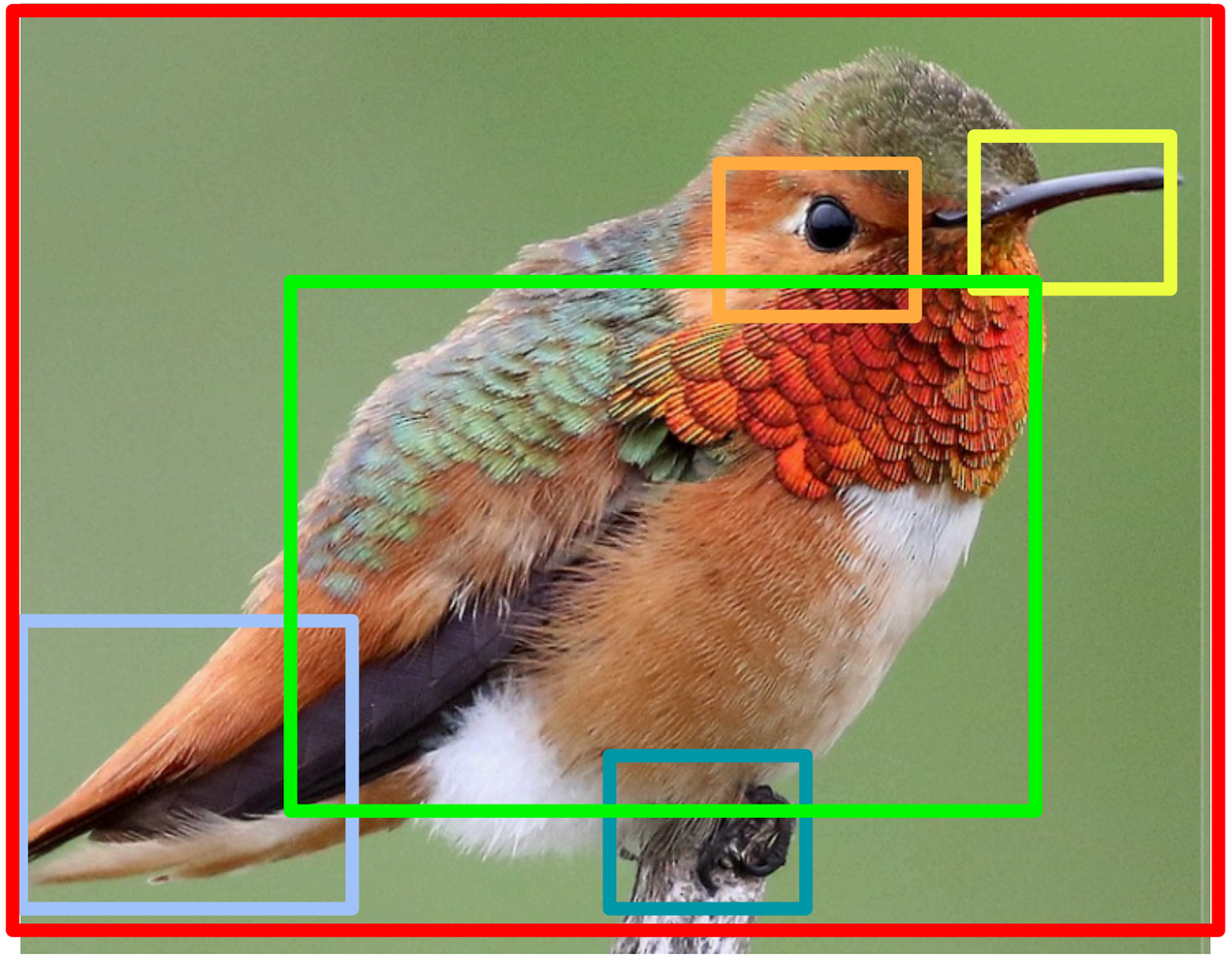


Identify Relevant Features

Figure out what the image is, and what the species of the animal is.

Allen's Hummingbird (So. Cal Local Bird)

- Beak closed
- Feathers
- Tail
- Feet
- Eyes



This image has no overlapping and a simple background

Annotation - Semantic Pixel Segmentation

Allen’s Hummingbird (So. Cal Local Bird)





Identify Relevant Features

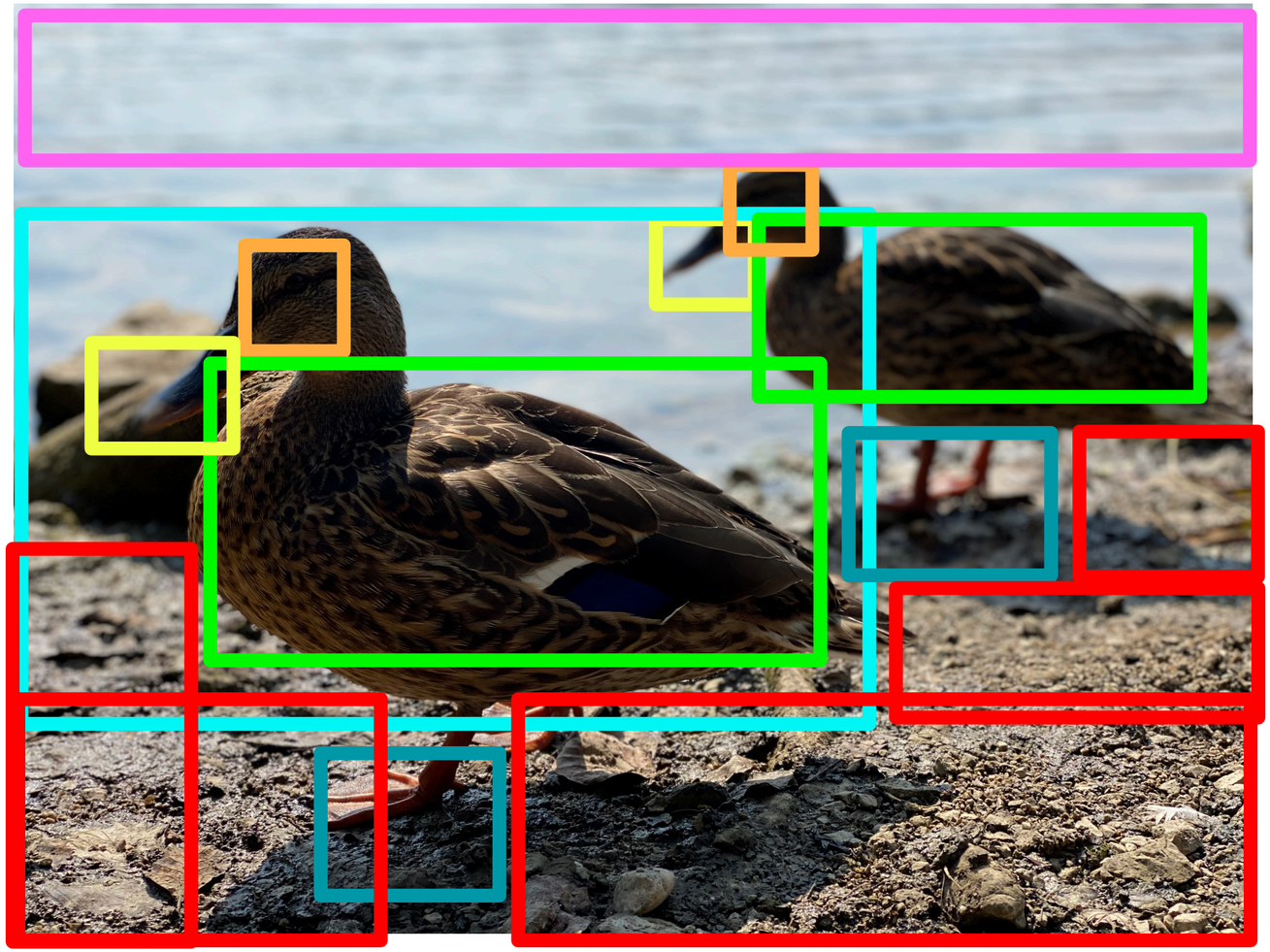
Figure out what the image is, and what the species of the animal is.

Allen's Hummingbird (So. Cal Local Bird)

- Beak closed
- Feathers
- Tail
- Feet
- Eyes

Overall:

- Texture
- Ground
- Ocean



This image has overlapping and non-simple backgrounds

Bird Annotation Instructions

These annotations will help us accurately identify bird features and backgrounds for our dataset, improving research quality.

Identify the Bird:

Find the Allen's Hummingbird in each image and get ready to label its key features.

Mark Key Features: (Use the bounding box tool to draw a box around each feature

Beak: *Use a yellow box to mark the closed beak.*

Feathers: *Outline the feathers with a green box.*

Tail: *Mark the tail with a blue box.*

Feet: *Use a light blue box for the feet.*

Eyes: *Outline the eyes with an orange box.*

Label Background Elements:

Texture: *Use a cyan box for any texture areas.*

Ground: *Mark the ground with a red box.*

Ocean: *Use a pink box if the ocean is visible.*

Stay Consistent: *Make sure each box is snug around the feature you're marking, without overlapping other parts. If the background is busy, just focus on outlining the bird's features.*

Double-Check: *After labeling, give it a quick check to make sure all key features are marked. Use the color-coding guide above to keep it consistent.*

Part 2: Cost Considerations

Estimate the Volume of Data Required

23,000 images

- 100-300 common species in our home area
- 500-1000 images needed per bird species

Identify your Annotators

Open Source Data

https://www.kaggle.com/datasets/alessiocorrado99/animals10

and/or

Crowdsourced
(okay to subject being a non-expert concept.)

Estimate Cost

- 15,000 bounding box image annotations at $0.02
- 8,000 pixel segmentation images at $0.90