PROJECT PROPOSAL

INDIVIDUAL WESTERN CAPERCAILLIE IDENTIFICATION AND DIFFERENTIATION

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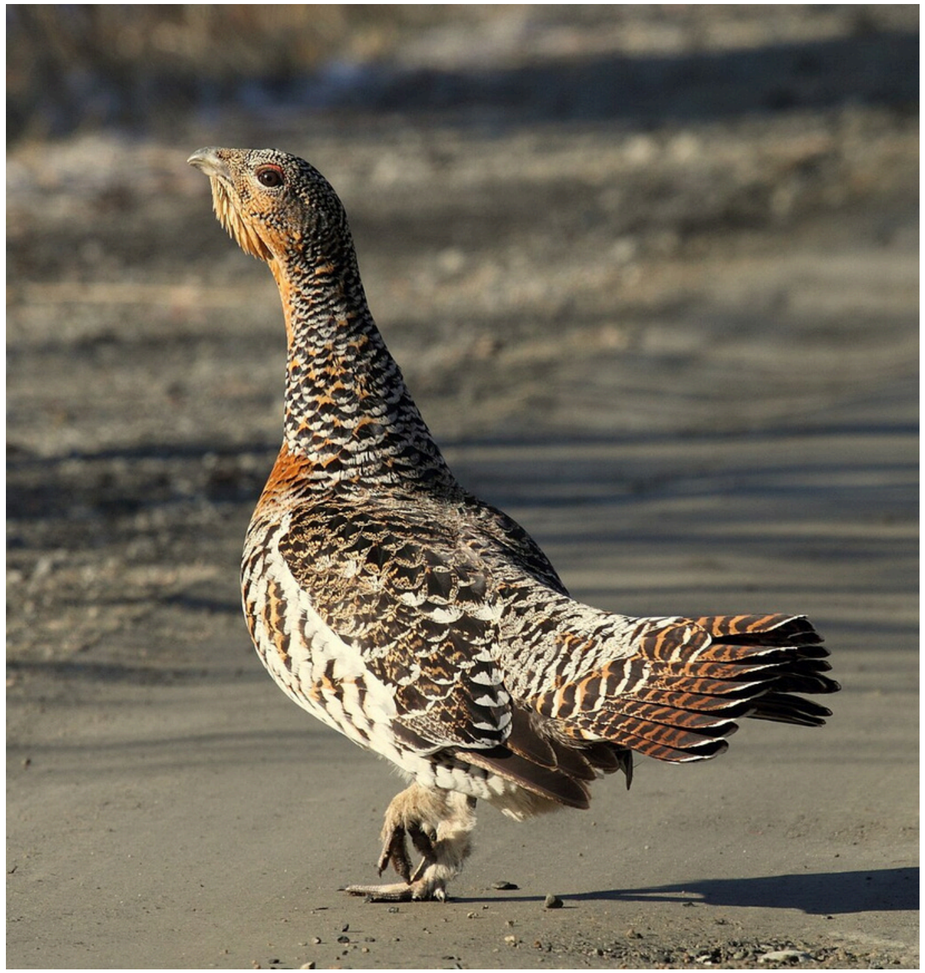
PLAN

INTRODUCTION

01

INTRODUCTION



Western Capercaillie

HTTPS://YOUTU.BE/ODQO_V5FS6C?T=4

Spatial distribution

- 8 subspecies
- Some pockets with a few hundred birds (300 Juras, 1000 Scotland)
- Split across mountain valeys inside the pockets

OBJECTIVE

02

OBJECTIVE

MONITORING BREEDING GROUNDS

- Counting individuals
- Tracking new arrivals
- Facilitating current work

PROPOSED SOLUTION

03

PROPOSED SOLUTION

SOLUTION NEEDED

- A non-intrusive tool that enables the differentiation of individual Capercaillies in their breeding grounds.
- This tool should minimize disruption to the birds and reduce the workload on trained specialists.
- It should remain cost-effective for local conservation operations.

SOLUTION

Takes the videos of the birds.

Counts and identify them.

PROPOSED SOLUTION

DATASET

https://media.ebird.org/catalog?taxonCode=wescap1&mediaType=video

Uploaded videos of Western Capercaillie. Contains time, place, images and sound.

Need to create different videos of the same individual.

Need to be transformes in a dataset (video editing and labeling)

MODEL DETAILS

01. Multimodal model taking sound an images.

02. Extract features of sound (simple CNN on spectrogram) and images (resnet 50) separately before combining them.

03. Input : 2 videos
Output : number of bird on each video and number of same individuals across the two videos