

CS 699 - Project

Bird Image Classification and Visualization

1 Image Classification

Uploaded image:



Prediction: Grey Heron

Classifier: SVM

Top 5 predictions:

| S.No. | Species Name | Prediction Probability |
|-------|-------------------|------------------------|
| 1 | Blue Jay | 0.22 |
| 2 | Grey Heron | 0.23 |
| 3 | Indian Peafowl | 0.22 |
| 4 | Little Egret | 0.15 |
| 5 | Red-Vented Bulbul | 0.18 |

Species wise prediction probability

2 Model Report

Classifier: SVM

Dataset: Images scrapped from eBird Portal for species classification across 5 species.

Total images: 5000

Train-Test Split: 80:20

Species:

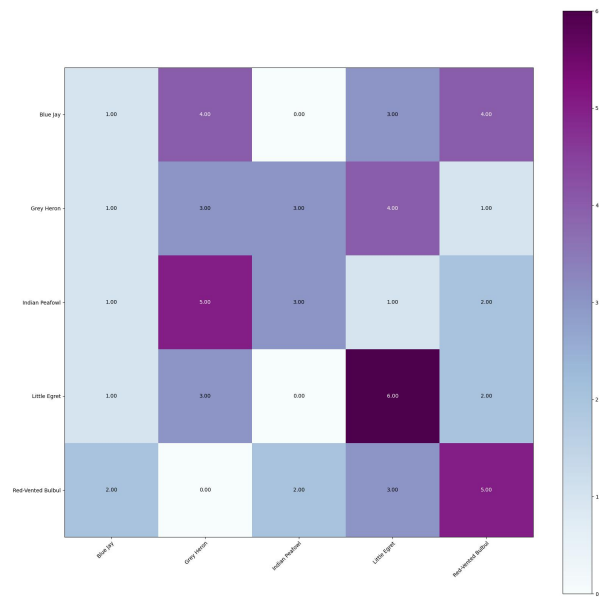
1. Blue Jay
2. Grey Heron
3. Indian Peafowl
4. Little Egret
5. Red-Vented Bulbul

Metrics:

Classification Report:

| | precision | recall | f1-score | support |
|-------------------|-----------|--------|----------|---------|
| Blue Jay | 0.17 | 0.08 | 0.11 | 12 |
| Grey Heron | 0.20 | 0.25 | 0.22 | 12 |
| Indian Peafowl | 0.38 | 0.25 | 0.30 | 12 |
| Little Egret | 0.35 | 0.50 | 0.41 | 12 |
| Red-Vented Bulbul | 0.36 | 0.42 | 0.38 | 12 |
| accuracy | | | 0.30 | 60 |
| macro avg | 0.29 | 0.30 | 0.29 | 60 |
| weighted avg | 0.29 | 0.30 | 0.29 | 60 |

Confusion Matrix:



Accuracy Plot:

