BIRD CLASSIFICATION USING EFFICIETNET(B0-B7)

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INTRODUCTION

This project explores the effectiveness of EfficientNet models B0 to B7 for bird classification. EfficientNet models are designed using a compound scaling method that uniformly scales the depth, width, and resolution of the network. By leveraging transfer learning and fine-tuning techniques, we aim to harness the power of these pre-trained models to accurately classify bird species.

RESULTS

	ACCURACY
EfficientNetB0	0.9945
EfficientNetB1	0.9869
EfficientNetB2	0.9843
EfficientNetB3	0.9910
EfficientNetB4	0.9890
EfficientNetB5	0.9779
EfficientNetB6	0.9807
EfficientNetB7	0.9862

CONCLUSION

The comparative analysis conducted showed that that the EfficientNetB0 model outperformed other models, achieving a remarkable accuracy of **99.45%** with a minimal loss of just 0.01712. This superior performance underscores the effectiveness of the EfficientNet architecture in handling the complexities of the dataset and making accurate predictions.

NOVELTY

- *Comprehensive evaluation of EfficientNet models:*
- *Comparison of model performance*
- *Analysis of model complexity and performance trade-offs*
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METHODOLOGY