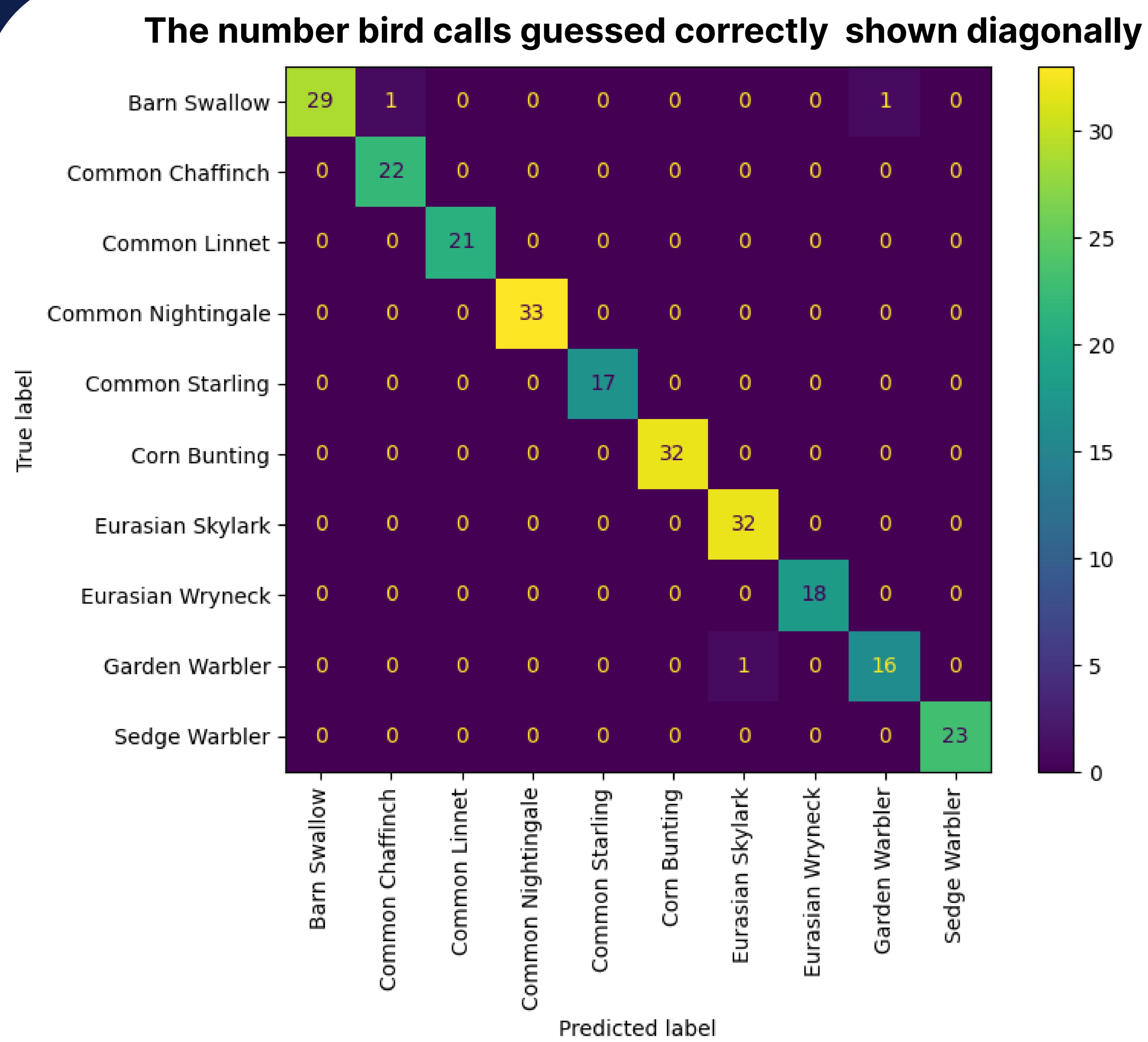


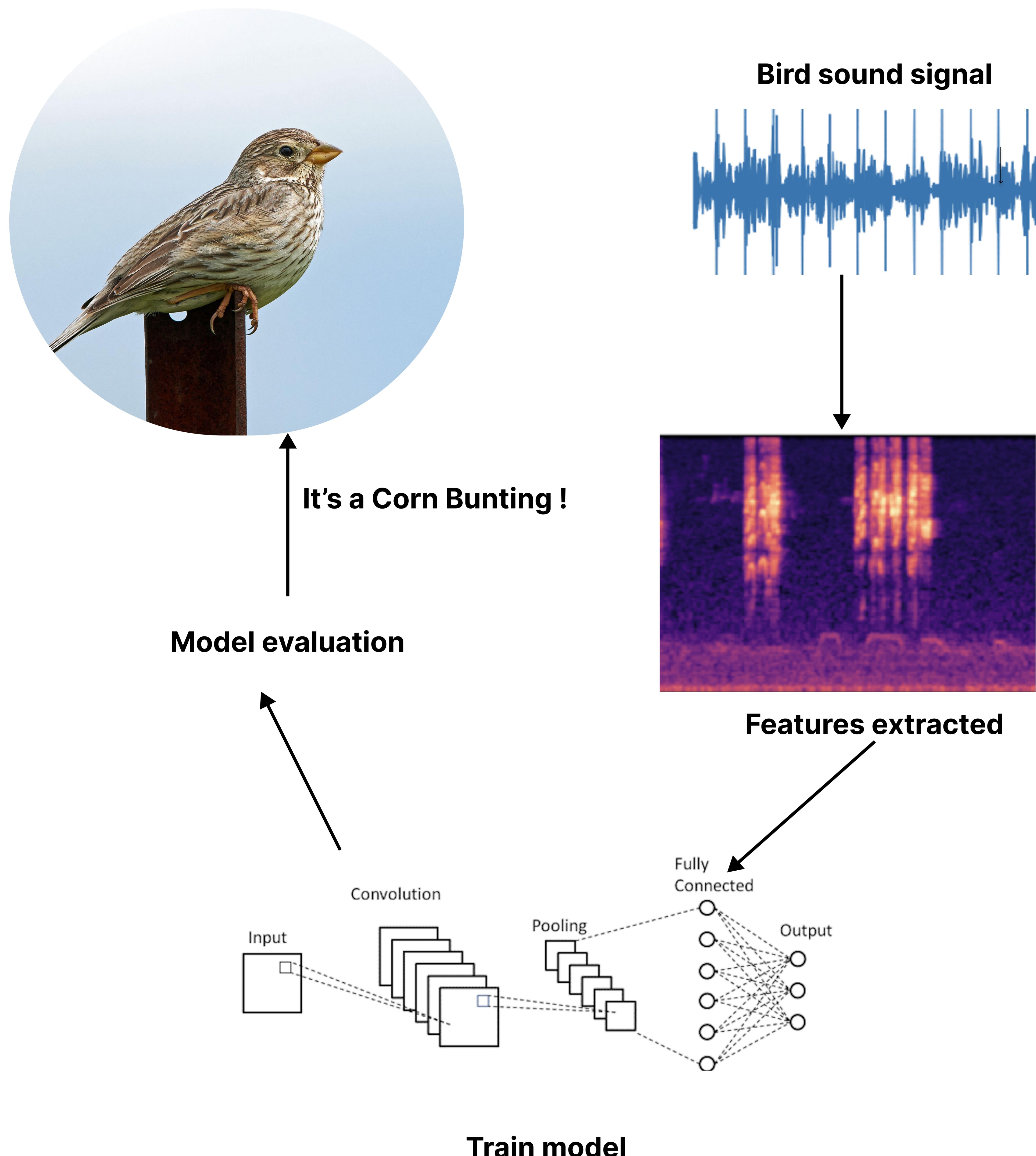
# Bird sound classification using Deep Neural Networks

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## Background

Understanding the diversity of bird species is crucial for assessing and conserving biodiversity. By classifying birds into different species, scientists can track their populations, monitor their habitats, and identify endangered species that require protection.



## Project aims

- Feature extraction techniques to extract meaningful and relevant data from bird sound audio signals.
- Build Deep Neural Network architectures models and train the models to predict bird sounds.
- Evaluate the models and select the model that with performance measure as the best model.
- Use trained model to predict 10 types of birds

## Methodology

- Build the code using TensorFlow framework and Jupyter notebook and run the Python scripts for both neural networks
- Pick the best deep learning model after evaluation and predict a Corn Bunting bird call recording

## References

- Phung, V.H. and Rhee, E.J., 2019. A high-accuracy model average ensemble of convolutional neural networks for classification of cloud image patches on small datasets. *Applied Sciences*, 9(21), p.4500.  
Spot, B. and Spot, B., 2021. Corn Bunting | Bird Identification Guide | Bird Spot. [online] British Birds | Bird Watching | Garden Birds | Bird Spot. Available at: <<https://www.birdspot.co.uk/bird-identification/corn-bunting>>.