

Screenshots

```

epochs = 10)

Epoch 1/10
4/4 [=====] - 23s 2s/step - loss: 4.1345 - accuracy: 0.3167 - val_loss: 2.7613 - val_accuracy: 0.5000
Epoch 2/10
4/4 [=====] - 6s 2s/step - loss: 6.3964 - accuracy: 0.6500 - val_loss: 1.0065 - val_accuracy: 0.5714
Epoch 3/10
4/4 [=====] - 6s 2s/step - loss: 0.5691 - accuracy: 0.9000 - val_loss: 2.8396 - val_accuracy: 0.5000
Epoch 4/10
4/4 [=====] - 6s 2s/step - loss: 4.6243 - accuracy: 0.3167 - val_loss: 2.4899 - val_accuracy: 0.5000
Epoch 5/10
4/4 [=====] - 6s 2s/step - loss: 0.0264 - accuracy: 1.0000 - val_loss: 6.5376 - val_accuracy: 0.5000
Epoch 6/10
4/4 [=====] - 6s 2s/step - loss: 1.5629 - accuracy: 0.8667 - val_loss: 6.9090 - val_accuracy: 0.5000
Epoch 7/10
4/4 [=====] - 6s 2s/step - loss: 0.0000e+00 - accuracy: 1.0000 - val_loss: 7.1651 - val_accuracy: 0.5000
Epoch 8/10
4/4 [=====] - 6s 2s/step - loss: 0.2911 - accuracy: 0.7667 - val_loss: 5.3315 - val_accuracy: 0.5000
Epoch 9/10
4/4 [=====] - 6s 2s/step - loss: 2.7627 - accuracy: 0.7833 - val_loss: 5.1170 - val_accuracy: 0.6429
Epoch 10/10
4/4 [=====] - 6s 2s/step - loss: 0.0000e+00 - accuracy: 1.0000 - val_loss: 5.4468 - val_accuracy: 0.5714
<tensorflow.python.keras.callbacks.History at 0x7f9192b560d0>

[35] # Evaluate the model
test_labels = "Test"
loss, acc = net_final.evaluate(train_batches, verbose=2)
print("Trained model, accuracy: {:.2f}%".format(100 * acc))

```

This screenshot captures the progress of training a Convolutional Neural Network (CNN) model for bird sound classification over 10 epochs. The training is conducted in a Jupyter Notebook environment using TensorFlow.

Key Details:

- **Epochs:** The training process is divided into 10 epochs, each representing a complete pass through the entire training dataset.
- **Training Loss and Accuracy:** For each epoch, the model's loss and accuracy on the training data are recorded. For example, in the first epoch, the training loss is 4.1345, and the accuracy is 0.3167. These metrics help in monitoring the model's learning progress.
- **Validation Loss and Accuracy:** The model's performance is also evaluated on the validation dataset at the end of each epoch. For instance, in the first epoch, the validation loss is 2.7613, and the validation accuracy is 0.5000. These metrics provide insights into the model's ability to generalize to unseen data.
- **Final Evaluation:** After completing the training epochs, the model is evaluated on the training batches. The final accuracy is printed at the bottom of the screenshot, showing the trained model's performance.

This screenshot provides a visual representation of the model's training process, highlighting the changes in loss and accuracy over each epoch. It demonstrates the learning dynamics and the effectiveness of the training procedure, offering a comprehensive overview of the model's performance during training.