Speech Recognition Lab Eval - 1
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This project focused on developing a speech command classifier using deep learning techniques. We utilized a dataset of spoken words designed for training and evaluating keyword spotting systems. The dataset was preprocessed by converting audio samples into Mel-frequency cepstral coefficients (MFCCs), which serve as input features for our model. We implemented a convolutional neural network (CNN) using TensorFlow and Keras, designed to recognize specific voice commands. The model was trained on the preprocessed dataset, using techniques such as data augmentation to improve generalization. After training, we achieved satisfactory accuracy in classifying various voice commands. To ensure reproducibility and ease of demonstration, we developed a system to save the trained model and dataset to Google Drive, complete with MD5 checksums for file integrity verification

Assets -> speech_command_assets

```
597/597 ━━━━━━━━━━━━━━━━━━━━ 2s 3ms/step - accuracy: 0.8714 - loss: 0.4631
Test accuracy: 0.8734800815582275
597/597 ━━━━━━━━━━━━━━━━━━━━ 2s 4ms/step
/usr/local/lib/python3.10/dist-packages/sklearn/metrics/_classification.py:1
  _warn_prf(average, modifier, msg_start, len(result))
/usr/local/lib/python3.10/dist-packages/sklearn/metrics/_classification.py:1
```