Deep Learning: Homework 5

December 5, 2023

Your task is to train a classifier on the Google Speech Commands v2 dataset using tensorflow. It contains short audio files which are grouped in folders and the folder name is their label. The label is the text of the audio which is a keyword like "ok", "left", "right", etc.. You can see information about data by following this link.

Given the code outline you are expected to complete it by following the comments. Suggested order for completing the code is: preprocessing.py, feature.py, network.py, train.py, callbacks.py, test.py, custom layers.py. You can start with simplest model in network.py and default callbacks from keras and after having a working codebase revisit network.py, callbacks.py and custom layers.py.

By running "python main.py" in the terminal your model should start training, and with "python main.py -t" it should do inference. Don't change anything in main.py.

Remarks:

1. You can use google for any question, but don't do copies of others' codes.

2. You can ask me whatever you want and whenever you want.