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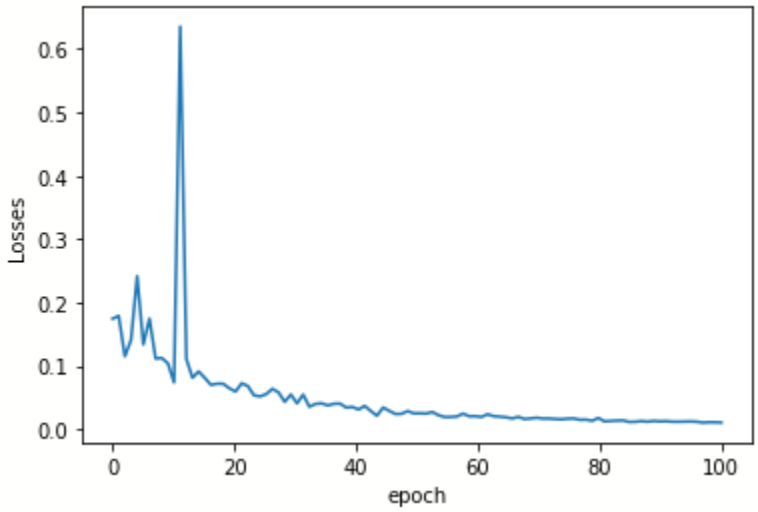
Each bullet represents corresponding question asked in pdf.

1) The deep neural network used is Convolution neural network with consecutive max pooling layers (total 2), followed by 3 linear layers.
2) The data was preprocessed by resizing the waveforms to equal time duration waveforms, reshaping to 128*128 size, taking melspectrogram of the input to convert it into an image classification problem, resizing to 128*128 size, etc.
3) Learning rate was set to 0.001, and SGD optimizer with cross entropy loss was used for the classification problem.



4) The above chart is for training loss vs epochs.

The validation loss observed was around 0.5, which is acceptable.
A custom dataset class has been written which only requires the path of the folder for the dataset. In order to run the code, the google drive should have the challenge_dataset folder in Mydrive directory, which is read by the code on clicking run. There are no other requirement for running the code. The code is essentially designed to run on colab, which can access google drive directly.