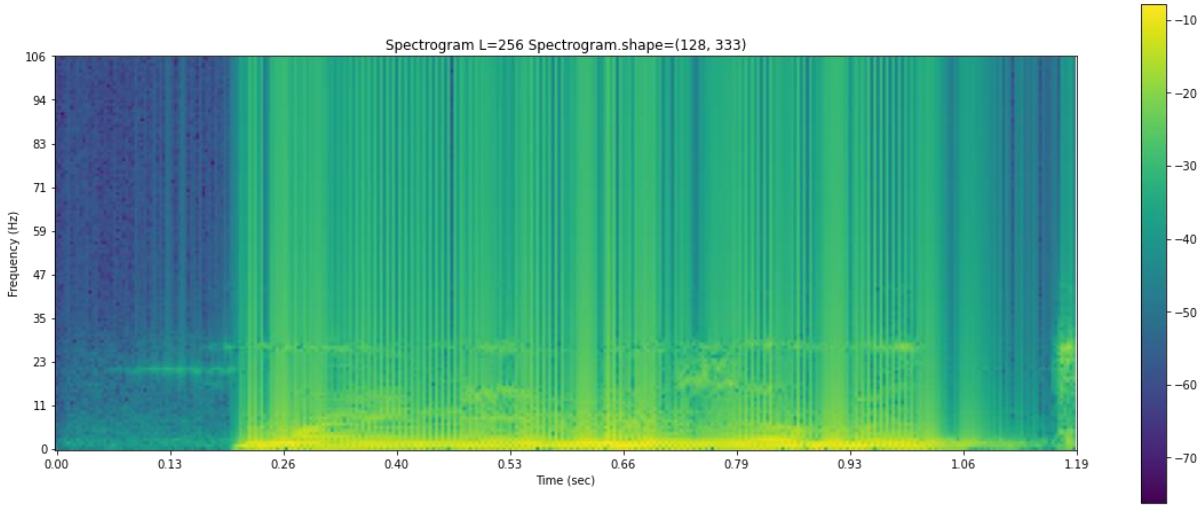
Report

Spectrogram of Audio File

(a) The recorded audio saying “My name is Amit” is enclosed: myname.wav

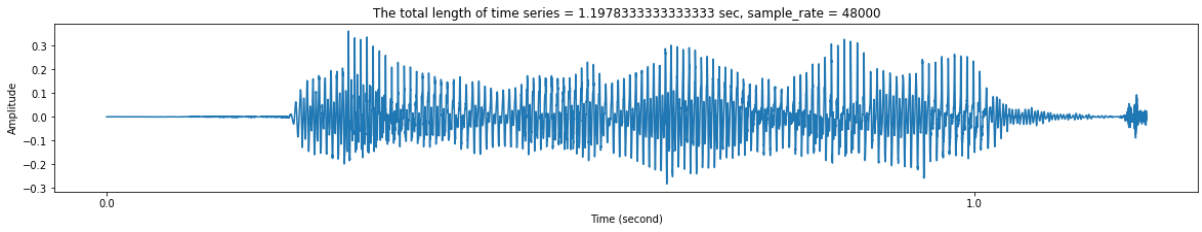
(b) Code that reads this audio file and draws the spectrogram of that file: audio_spectrogram.ipynb or audio_spectrogram.py or audio_spectrogram.ipynb - Colaboratory.pdf

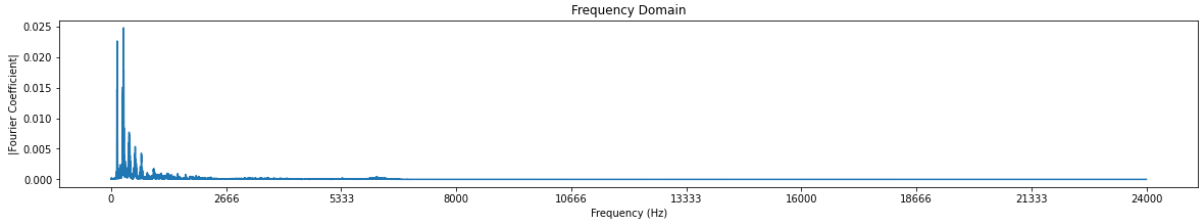
(c) **Spectrogram:**



The length of audio is 1.197833 seconds. Till about 0.2 sec, there is no voice (apart from some background noise) that is indicated in the spectrogram. Post that there is voice. The audio is almost of the small range frequency (pitch), hence showing a fairly uniform spectrogram with consequent small gaps indicating small pauses.

Approach: Firstly, the sound signal is plotted in time domain. Then used DFT (Discrete Fourier Transform) on entire dataset to visualize the signals at frequency domain. Then the above spectrogram is created. Code is enclosed.





Link to Colab Notebook:
https://colab.research.google.com/drive/1S3YF_cm1NTeTZ_rPEXIX_PCHAH76ktFW?usp=sharing

Steps to run:

- Upload myname.wav to the notebook
- Run the cells

References:

- https://fairyonice.github.io/implement-the-spectrogram-from-scratch-in-python.html