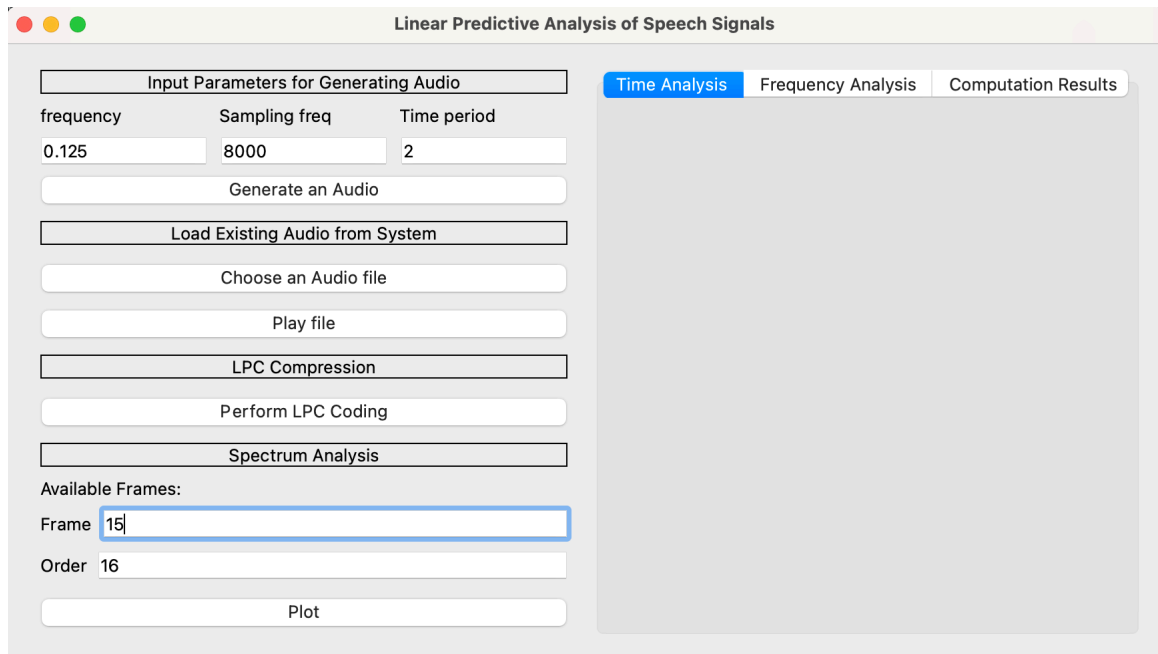# CS571 Project User Manual

Linear Predictive Coding

Rajesh R

Make sure you have installed all the prerequisites packages listed in GitHub page before running the code.
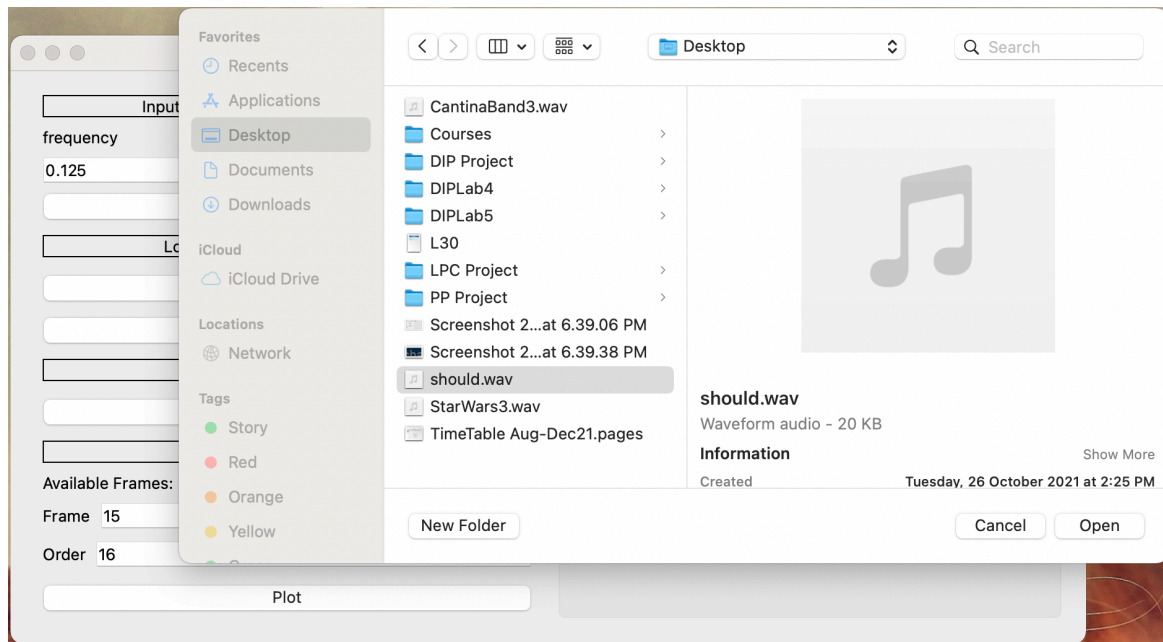
Usage:

python mainUI.py

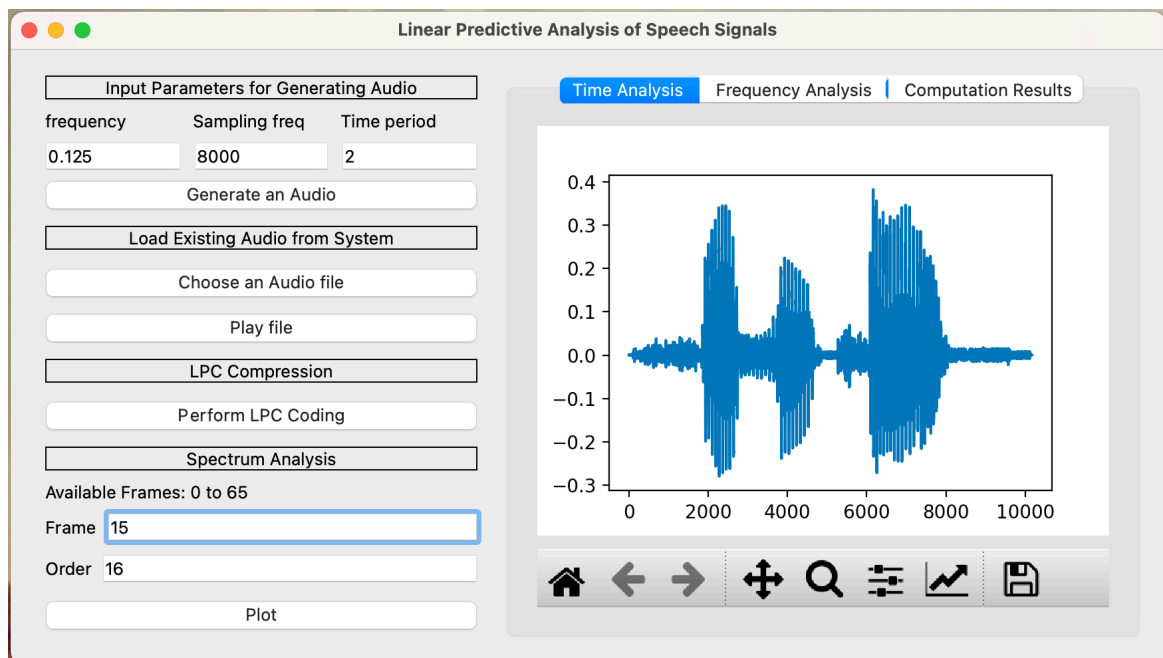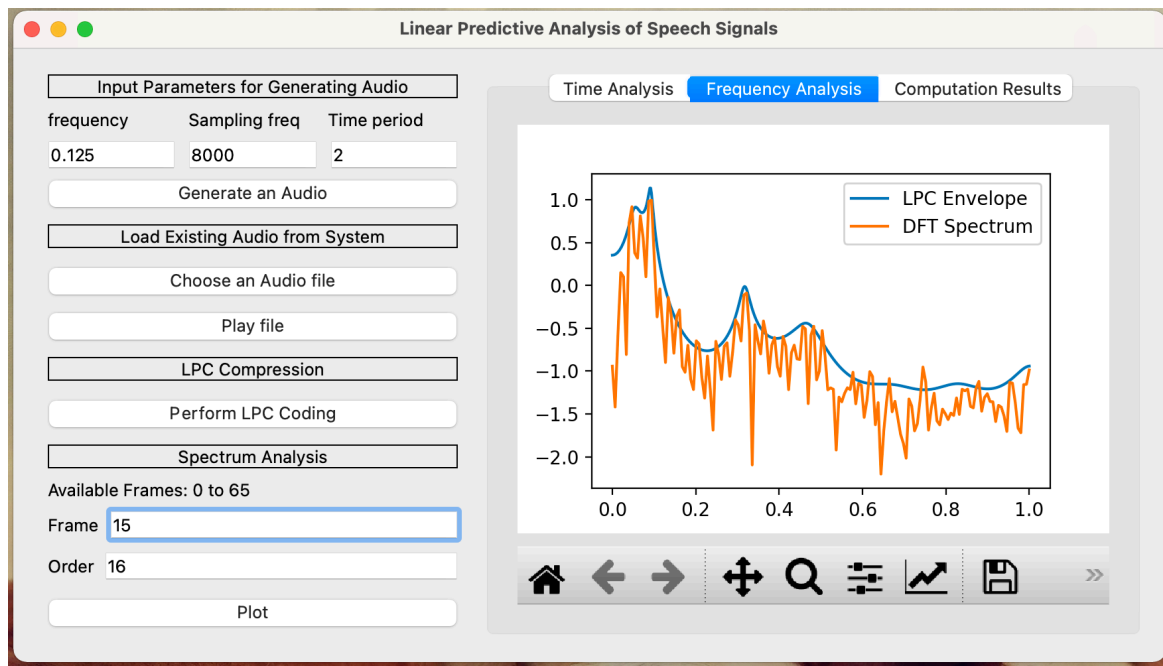An UI will appear as shown.

Features:

- We can generate a sinusoidal signal by adjusting the frequency (float), sampling frequency (int) and time sec (int) and then click **Generate an Audio** button.

- We can load an existing audio with **Choose an Audio file** button, it leads you to the current directory, from there you can choose the audio.

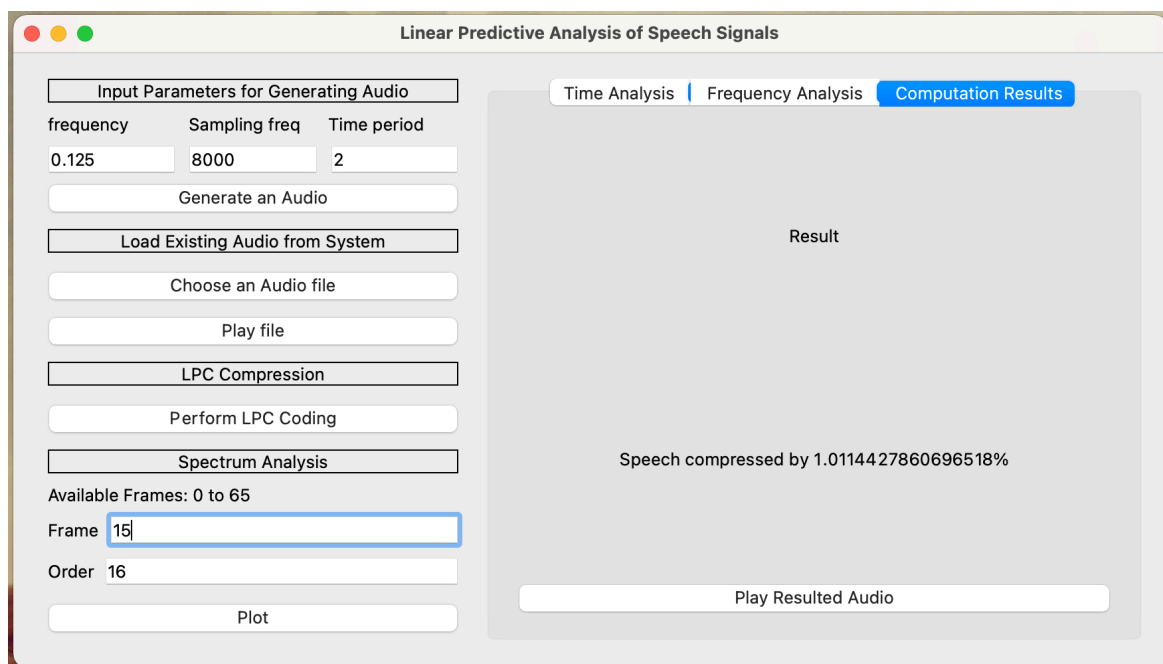- Select the valid (.wav) file to proceed. If you choose other files it will throw an error.

- After generating audio or loading audio you will get the time domain analysis of the speech signal.

- After this there is a label with shows the available frames for FFT & LPC Analysis. So give any integer input in the given range and you can give the order (>1). Default values are chosen. After selecting press **Plot** button.

- Now perform LPC Coding by pressing **Perform LPC Coding** button

- You can check results and play the output file by clicking **Play Resulted Audio** in tab3 and input file by clicking **Play file** in main window and compare results.
- The UI is self explanatory with proper error messages.