Exercise 1: Basics of Speech Processing

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DeadLine: Monday, September 11, 2023

Instructions

- Implement and return files as **Exercise_1_yourfirstname.ipynb** along with **your speech file**.
- Return your answers to MyCourses by **23:59 on Monday, September 11th**, 2023.
- For most of the exercises, you will work with your own speech file "yourfirstname.wav". Record the speech signal by telling the statement of **"Hello. This is a sound example by XX"**, (e.g., XX –> Mohammad Vali) in a quiet environment, and then store the file as "firstname.wav" **(i.e., Mohammad.wav")**.
- We will be using sampling frequency of $F_s = 16\ kHz$.

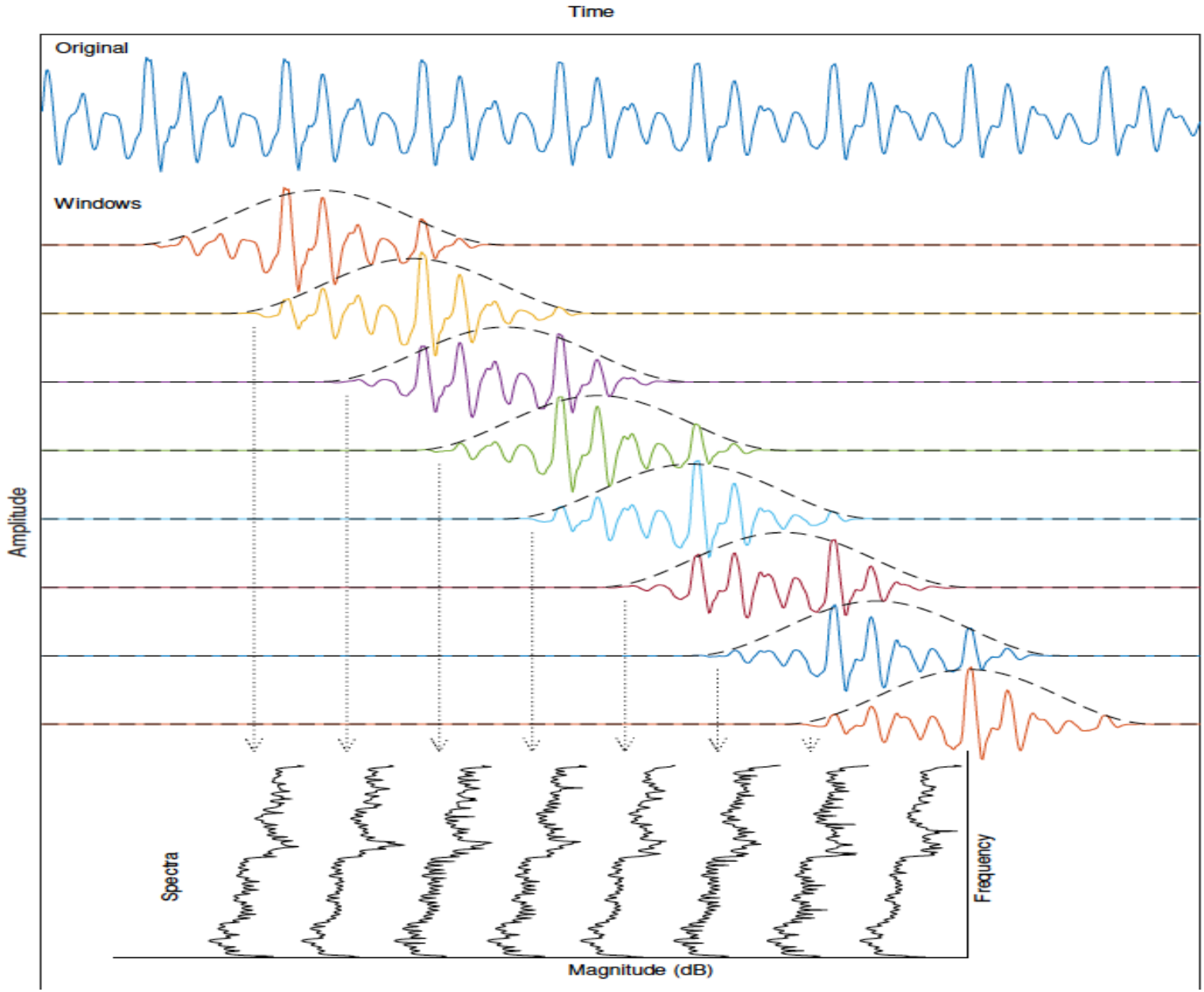
Objective

- The goal of this exercise is to get acquainted with the basics of speech processing. This includes **recording, reading, resampling, windowing, and computing magnitude spectrum and spectrogram along with visualizations**.

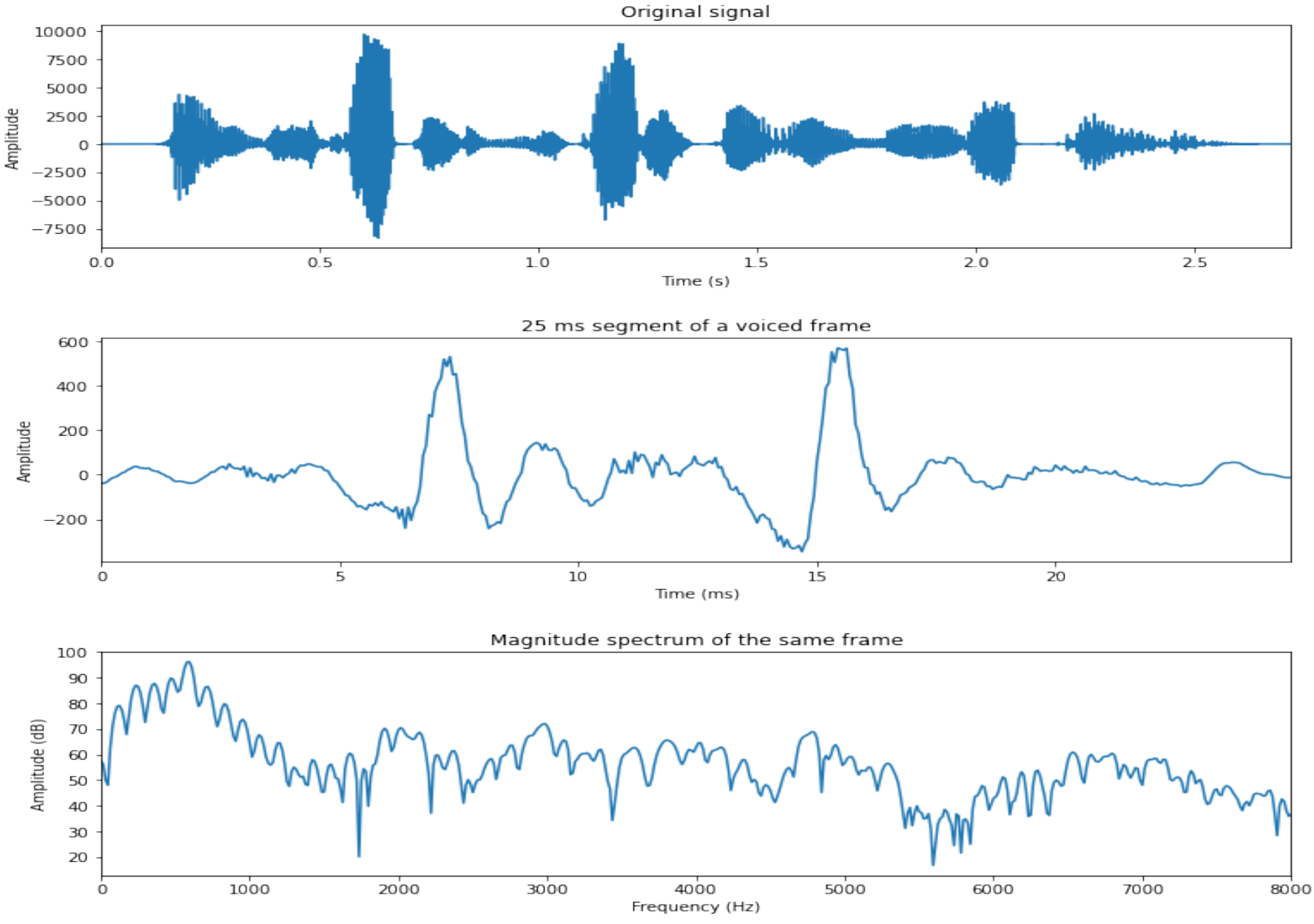
Basics of Speech

- Where is the important information in a speech signal?
- How to process a speech signal to extract desired information?

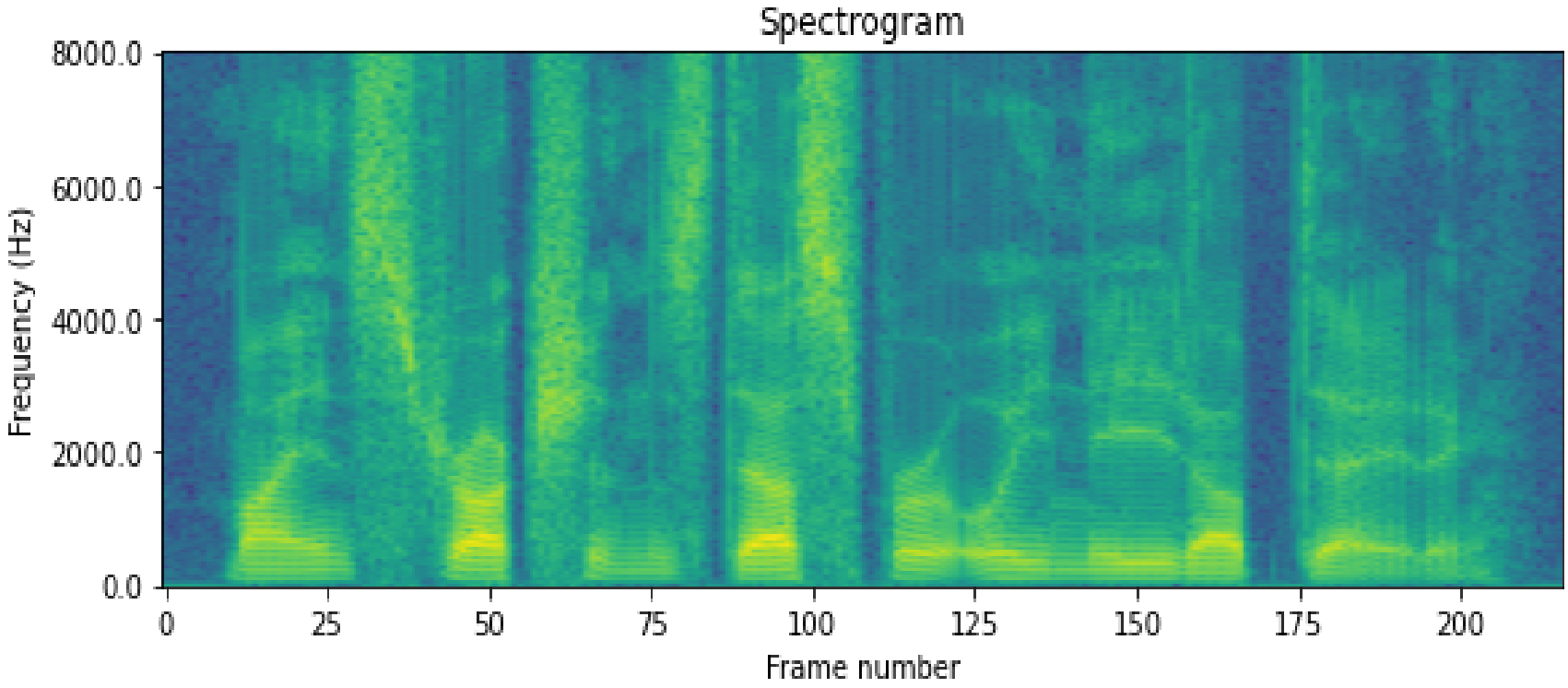
Windowing and Magnitude spectrum



Expected plot (1)



Expected plot (2)



Learnings

Experimental findings, Analysis, Reasoning and and any other?

Contact

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