**Praat exercises**

1. *Changing the pitch range*

* Record a sentence using falling intonation.
* Create a Manipulation object for the sound.
* Edit the Manipulation object to produce a rising intonational contour.
* Raise the new contour’s pitch range (select the contour and use ‘shift pitch frequencies’) by 50Hz.
* Select the Manipulation object and click “Get resynthesis (LPC).”

Save the original sound file as “orig.wav” and the modified sound file as “new.wav.” Both files should be in $YOURUNI/part1.

1. *Pitch contour cloning (use the wav files you will find in this directory, beach.wav and speech.wav)*

Replace the pitch contour in speech.wav with the contour in beach.wav.

* Read in both files.
* Create a Manipulation object for beach.wav.
* Extract the pitch tier.
* Create a Manipulation object for speech.wav.
* Select the pitch tier of beach.wav and the Manipulation object of speech.wav and click “Replace pitch tier.”
* Select the Manipulation object for speech.wav and click “Get resynthesis (LPC) or Get resynthesis (overlap and add).”

Save the new sound file as $YOURUNI/part2/new.wav.

1. *Emotional speech*

* Record “My Mama lives in Memphis”
  + as angry speech
  + as sad speech
  + as happy speech.
* For each token, find
  + Mean and maximum pitch
  + Mean and maximum intensity
  + Duration
* Do you see any differences in pitch, intensity or duration for the three sounds? Differences in the f0 contours? Based on this, what features do you think would be useful for classifying your emotions?

Save the three sounds as “angry.wav,” “sad.wav,” and “happy.wav,” respectively in $YOURUNI/part3. Save the values you found for pitch, intensity and duration, along with your observations, in “emotions.txt.”

1. *Mapping vowel space (use the Swedish vowel space plot in the file Swedish\_vowels.png in this directory)*

You will be given a plot of the vowel space of Swedish monophthong vowels. Your task is to plot the monopthong vowels of your vowel space in your native language on the Swedish plot and to note which Swedish vowels your own vowels are closest to. To do this exercise you must:

* Record the monopthong vowels in your native language (Chinese, English, German, French) in Praat in a single file. Save it as YOURUNI\_LANGUAGE.wav.
* Label each vowel in a Praat tier at the beginning of the vowel.
* Measure the formants of each of your vowels at the center of the vowel.
* Plot F1 and F2 on the Swedish vowel space plot.
* In a separate README file, explain which Swedish vowel each of your vowels is closest to and how you determined that.
* Turn in the .wav file, label file, and README file you created in Courseworks before the exam on March 7.
* Turn in your vowel space plotted on the Swedish plot, in hard copy at the exam on March 7, or in a scanned file in Courseworks.

SUBMISSION: zip the $YOURUNI folder and upload it to Courseworks.