

Project Milestone Update, 07-400, Spring 2022

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1 Progress Report

I have read followed the tutorial from HuthLab [here](#) explaining how to model the representation of speech in the brain. This has given the insight how fmri data is processed are segmented for training models.

I have implemented a framework to segment the .mkv file of the *Friends* episode based on time stamps of a given utterance. This allows me to train a model to correlate the relationship between the emotion on screen to what they are feeling by analyzing their fmri data. I have been working on making the timings more precised by aligned the correct words to the audio file. I had unsuccessful results with [CMUSphinx](#) and better results with google transcriber through [speech_recognition](#) module. I was unable to download the software from [Gentle](#) which should've automatically shifted the subtitles. Prof. Webhe suggested I use [p2fa-visalab](#) which should preform similiarly to gentle.

I have obtained partial code to do this training and will hopefully be starting training within the next couple of weeks.

2 Reflection on Initial Plan

2.1 Major changes

There have been no major changes in what I plan to accomplish at this time.

2.2 Meeting your milestone

My second milestone was to already have a working model and most of the literature review. I was pushed back creating the model because of an inability to access the data for the first couple weeks of this semester. I should be able to create a working model by the next milestone meeting. As per the literature review, I have found and read papers applicable to this area and need to start summarizing and creating a rough draft.

2.3 Surprises

The timing of subtitles and the data set seem to be the same thing. Both are flawed by about 5 seconds. The researchers at neuromod did not show participants the friends theme song so this had to be overcome by shifting the timing.

2.4 Revisions to your 07-400 milestones

Everything is currently one milestone behind. But I had planned to be finished early so this is not a problem.

2.5 Resources needed

I am currently using the machines for the neuromod project with Compute Canada's resources. In addition to using the machines for the cortex project with CMU's resources.