**Progress Report Week #4**

Team 9

Team Name: Nostalgia

Date: 02/04/2025

Team Members: Shahil Merchant, Jason Forrester, Ye Lin, Eason He

**Progress:**

All - Individual Attempts to get the GAN to work: 100%

Shahil - Prototype Training of Model: 40%

All - EEG signal data collection for trial: 100%

Ye & Eason – DynamiCrafter (Image to Video): 80%

**Shahil:** To try and get the training code working, I took a step back and decided to use sample training data for now. However, I have hit a bit of a wall with the mac compatibility. With the generate code, I was able to hunt down any function that used CUDA and switch it to using Metal, which is the MacOS equivalent. However, with the training code seems necessitate CUDA. Therefore, the next step will be to run it on Jason’s computer which has a NVIDIA GPU and CUDA.

**Jason:** With some advice from shahil, I managed to complete the StimPres.py program with an interrupt, StimPresInt.py. This will allow us to pause the program if something happens without having to stop and restart n the whole thing. I also worked with Ye & Eason to attempt to get the image to video program to work, we managed to download and run it for about 50 minutes until more was needed to install. Due to running out of memory space on the drive I had it downloaded on we had to stop and prepare to move it to a new drive.

**Ye**: Run the DynamiCrafter (Image to Video) on Jason’s computer last Sunday and it works pretty well. The images did not generate into video because it required another package. The two images require more than 15 minutes to generate into video. We will try to run the DynamiCrafter again on Jason’s computer later.

**Eason:** Last week, Ye and I have been looking for a way to convert images into videos on the computer. However, due to equipment problems, we can only choose to run it on Jason's computer, and it is still in the debugging stage.

**Plans:**

**Shahil:** When Jason is available, I will run the training code on his computer. Until then, I will work on the EEG translation code, which takes the EEG input from our headset and converts it into a format that the LSTM can consume for training and generation.

**Jason:** Work with Shahil to run the training code, move the image to video program to a new drive and attempt to reinstall, make a guide for installation instructions for the image to video program, and if I have time implement a way to mark when an issue has occurred during the stimulus presentation.

**Ye**: After Jason and Shahil successfully run the training code on Jason’s computer, I’ll contact Jason and use his computer to download all the package requirement, then run the DynamiCrafter again to see if the images can generate into video.

**Eason:** After Jason and Shahil successfully genrate the images on Jason’s computer, I will try to write and find relevant codes that can optimize images which are generated from the signals such as converting blurry images into clear ones.

**Issues:**

**Shahil:** Just the Mac compatibility issues, sidestepping to windows to solve.

**Jason:** I had limited memory available on my SSD, so we had to stop running the image to video program part way through as it required an additional program to be installed part way through.

**Ye**: only package issue and limited memory available on Jason’s computer.

**Eason:** Only package issue and limited memory available on Jason’s computer.

**Schedule**:

