**Emotional States**

**Members:** Green, Mikela; Menendez, Joaquin; Zhao, Sicong.

**Overarching goal**

Quantify the valence and arousal of the emotional state of subjects. To accomplish this, we are going to train a Machine Learning model using data from a wearable fitness tracker and additional, neuroimaging studies and personality and demographic data. This data was collected in different experiments from the Motivated Cognition and Aging Brain Lab. The main idea is that this model would be able to predict accurately the emotional state of an individual. As a long term plan, we would like to develop a model with similar accuracy but using fewer data to be able to apply this is a commercial setting.

**To-do list (mandatory)**

* Clean the data from the experiment DND
* Transform all the data frames (currently in pickle object format) in a SQL database.
* Run a simple model with the already clean data to set a benchmark.
* Perform connectivity analysis on the neuroimaging studies.
* Research about how to build a model that can incorporate repeated measures and time-series data
* Implement advanced model, interpret the results and compare with the baseline model
* Write a project report and make a poster

**Reach goal**

Train and test a model with ‘more accessible data’ that has a similar accuracy that the previous model