Intro

Auditory stimuli can be perceived in multiple different ways. By focusing one’s attention in different ways, perception of a stimulus changes drastically. This can be seen in the “green needle/brain storm” auditory illusion (GNBS illusion), where listeners will hear either “green needle” (GN) or “brain storm” (BS) depending on whichever they are thinking about. Currently, the mechanisms are unclear for the neural differences that cause the change in perception. In this project, we look at using machine learning to create a classifier that can distinguish perceptual interpretations of the illusion from the EEG signal.

Methods

Participants will be presented with the GNBS illusion and have attention directed to either GN or BS for n trials. This data will then be used to train a supervised learning model with the objective being to reach a classification accuracy (for GN or BS) to be greater than 60%.