Introduction to my healthcare research – Fall 2021

The goal of this research is to detect change in behavior using the inputs of a microphone on the feet of a subject. The patient has a device attached to his/her feet that record the amplitudes of footfalls. We go through the data and try to find interesting patterns after cleaning the data. That is the short version. For the first part of the project, we just try to use the K Mean algorithm to separate the amplitudes created by the left foot from the one created by the right foot. We achieve a 93% success rate on this task using the K Mean with k =2. The next step will be to focus on change in behavior and try to detect for example fatigue just by reading microphone inputs. So far, I have been reproducing the result of previous experiences (to make sure I understand them) and eventually I will be able to start researching on how we could detect fatigue by analyzing the gaze. I am excited!