III. Project Overview

There are many different types of psychological treatment for those with mental health issues and it can be difficult to figure out what treatment best suits each person. One way to approach finding the best treatment for a patient is by factoring in the person’s personality and looking into how their temperament affects their thoughts, emotions, and behavior in different contexts. The WSU Psychology Clinic is trying to utilize this personality-based approach and investigate a patient’s temperament and responses to everyday situations and try to build the best treatment based upon those results. Through this project, the WSU Psychology Clinic can do a more evidence based approach and show how a person’s personality effects how well they respond to different types of treatment.

This is where the Person in Context Assessment (PICA) comes into play. The focus of this project is split among two separate Qualtrics surveys used to collect more information about a patient’s temperament. The first survey is one that asks questions about if the user has any goals in different areas of their life such as work, relationships, and personal health as well how much the user is working towards that goal and how happy they are about it. Then the results of the user’s temperament are calculated, and a PDF of the results are sent to the email. Our first course of action will be to fix the previous Python code that emails the PDF results to the user. Right now, the user must go into PythonAnywhere to be able to fetch their results, but we want to make sure that their results can be emailed to them. As well, we will be looking into editing the format of the PDF and changing the graphs and results to make sure that it is understandable to the user and looks visually appealing.

The second survey that is used in PICA is one that is used by the patient daily. The user will input their experiences that day and then will also fill in their thoughts, feelings, goals, and actions for the event. Then, emotionally similar events are grouped together and then the clinician can look at both the patient’s temperament as well as how they reacted to these events and use that personality-based data to give a more personalized mental health treatment plan. With this second survey, we want to work on integrating the first survey so that the user would be able to see their original PICA results inside of this daily survey. The clinician should be able to enter the patient’s PICA results into the daily survey and have the user be able to see the PDF of their results in the daily survey app. As well, the daily survey should be able to tailor questions to the user based upon their temperament results and better predict how they may react to daily situations.

Finally, with the daily survey we will be looking into creating a more complex clustering algorithm. We need to be able to group a user’s experiences based upon how similarly the patient thought or felt during the event and that is done based upon what feelings the patient fills in on a checkbox list. Any events that have over 50% shared feelings will then be categorized as the same. We want to either move towards using more complex math to group the different experiences more accurately or possibly investigate utilizing the ChatGPT API to cluster the data. The user can fill in the checkboxes for how they were feeling but they can also write any specific thoughts or emotions into a textbox. The current simpler clustering algorithm does not factor this text box in when clustering so the patient or clinician would have to go in themselves to the survey and read the text box and manually cluster the events if they see the need to. By utilizing AI and ChatGPT, we would remove the need to manually read and cluster those events that have information stored in the text box and instead the AI could read the text boxes and suggest which events should be clustered.