# Introduction

## Project Overview

Our project is two applications. One is a Qualtrics based application where a patient will take the Person in Context Assessment (PICA) and then get a PDF of their results automatically emailed to them. Our other application is a web based one that will be used by therapists and their patients. Patients will be able to enter events from their day and log the thoughts, feelings, and behaviors related to the event. The application will then be able to connect similar events and cluster them together. The therapist can then look for any if-then signatures to help diagnose the patient better.

Given that we are building off the previous team’s work, there are already some tests in place for the work they completed last year. We will be implementing new tests for the new functions we have implemented so far. Our first test will be for the PICA PDF email automation. Before, users would have to go into PythonAnywhere to get their results, but we have fixed it so now the results are automatically sent to the user’s email. We will need to test the Qualtrics workflow to make sure the call to our Flask application is working properly and that the correct user data is fetched from the Qualtrics API.

Another functionality we plan to test is with the event logging application. We plan on implementing the improvement of the clustering algorithm for the web application. Currently the system uses a very simple algorithm where if two events share over 50% similarity then they will be clustered. We will be looking into the possibility of using AI to create a better clustering system and will test it in the future as we develop it. We will also be writing new tests for the previous team’s work to ensure that those tests are validating the app properly.

## Test Objectives and Schedule

The objective of our tests is to generally gain confidence that the code that has been written for this project will successfully and consistently execute the desired behavior and fulfill all the requirements at runtime. We plan on writing tests for every new feature we develop as well as reviewing the tests previously created. Throughout the development, we plan on following an agile methodology. This means we will develop, create our tests, test our code, and then deploy. Each developer will write tests for the code they have written. We will follow the previous team’s usage of Pytest for unit and integration tests.

## Scope

This section of the project report will go over our current strategy and plans to validate our applications. It will go over how we plan to test the applications as well as create test material. This section will cover the testing strategy, various testing plans, and environment requirements.

# Environment Requirements

For hardware requirements, we need a computer that is capable of running our program. This computer must have sufficient processing power and memory to run our web application as well as a stable network to be able to access MongoDB, PythonAnywhere, and Qualtrics.

In terms of system software, we need an operating system that supports Python since that is the programing language we have used for our project. Also, we need an environment that can support MongoDB for our database.

Our testing environment will be relying on specific application development tools. We will be using Pytest as well as the Github CI pipeline to host our testing. The Github framework will provide a testing pipeline that allows our team and future developers to ensure the tests run and pass before committing and merging the work.