

UI Automation Testing

The following test cases cover UI automation testing for the PulsePredict web application. These tests are designed to validate the functionality and responsiveness of key user interface components such as input fields, buttons, and displayed outputs. Using Playwright with Pytest, the test suite simulates real user interactions in a headless browser to ensure the application behaves as expected. This helps catch UI regressions early and supports continuous integration workflows.

Test Case ID: #UIA001

Test Scenario: Verify if the Streamlit application starts and displays the title correctly.

Test Steps:

- Start the app.py using the subprocess module.
- Launch Playwright and navigate to <http://localhost:8501>.
- Wait for the text “PulsePredict” to appear.

Prerequisites:

The system must have Streamlit, Playwright, and all app dependencies installed.

Browser: Chromium (headless via Playwright)

Device: Windows 11 PC

Test Data:

Not applicable

Expected/Intended Results:

The title “PulsePredict” is visible on the page.

Actual Results:

As expected.

Test Status – Pass/Fail:

Pass

Test Case ID: #UIA002

Test Scenario: Verify the visibility of the input field on the Streamlit UI.

Test Steps:

- Start the app and open the browser using Playwright.
- Navigate to <http://localhost:8501>.
- Wait for any input tag to appear.

Prerequisites:

A running Streamlit UI with an input field present on the home page.

Browser: Chromium (headless)

Device: Windows 11 PC

Test Data:

Not applicable

Expected/Intended Results:

The input field is detected and visible.

Actual Results:

As expected.

Test Status – Pass/Fail:

Pass

Test Case ID: #UIA003

Test Scenario: Verify the first button on the Streamlit UI is clickable.

Test Steps:

- Start the app and open the browser using Playwright.
- Navigate to <http://localhost:8501>.
- Wait for the first button element to appear.
- Check if the button is enabled (clickable).

Prerequisites:

A running Streamlit app with at least one button.

Browser: Chromium

Device: Windows 11 PC

Test Data:

Not applicable

Expected/Intended Results:

The first button is clickable (enabled).

Actual Results:

As expected.

Test Status – Pass/Fail:

Pass