Test Plan Identifier

To evaluate the accuracy of the machine learning model for predicting diabetes based on glucose and blood pressure levels.

References

SRS (Software Requirement Specification) document.

Introduction

The purpose of this test plan is to assess the performance of the machine learning model that predicts the likelihood of diabetes based on glucose and blood pressure levels. The model is trained using a dataset with labeled data.

Test Items

Download dataset in CSV format.

Extract features (glucose and blood pressure) and labels from the CSV file using pandas.

Build the machine learning model using a specific ML algorithm.

Evaluate the model's prediction accuracy and analyze the results.

Software Risk Issues

None identified.

Features to be Tested

Download data in CSV format.

Extract features and labels from CSV file using pandas.

Build the machine learning model using the chosen ML algorithm.

Evaluate the model's prediction accuracy.

Features not to be Tested

None identified.

Approach

Test the functionality and requirements by inputting blood pressure and glucose levels and verifying if the predicted output aligns with the expected results.

Item Pass/Fail Criteria

The test cases pass if the predicted output matches the expected output based on the input blood pressure and glucose levels.

Suspension Criteria and Resumption Requirements

Testing should be suspended if any functionality or requirement is not meeting the specified criteria. The test can resume once the issue is resolved.

Test Deliverables

System test plan, test cases, test scripts, automation scripts (if applicable), test execution results, summary report.

Remaining Test Tasks

None identified.

Environmental Needs

None identified.

Staffing and Training Needs

One person is required to conduct the testing.

Responsibilities

The tester is responsible for executing the test cases and reporting the test results.

Schedule

Testing will commence from 07-06-2023 and conclude on 12-06-2023.

Planning Risks and Contingencies

Risk: The machine used for testing is not functioning or not yet available.

Contingency: Arrange an alternative machine or delay testing until the machine is available.

Approvals

The test plan requires approval from the product manager once the product functionality has been verified without errors.

Glossary

SRS: Software Requirement Specification.

Test Cases

T\_diabetes\_1: Input blood pressure as 120 and glucose as 180. The expected output should be 1 (diabetic).

T\_diabetes\_2: Input blood pressure as 80 and glucose as 140. The expected output should be 0 (non-diabetic).

T\_diabetes\_3: Input blood pressure as 90 and glucose as 100. The expected output should be 0 (non-diabetic). (Negative test case)

T\_diabetes\_4: Input blood pressure as 100 and glucose as 220. The expected output should be 1 (diabetic). (Negative test case)

T\_diabetes\_5: Input blood pressure as 60 and glucose as 70. The expected output should be 0 (non-diabetic). (Negative test case)

These test cases will help assess the accuracy of the machine learning model in predicting diabetes based on the provided input parameters.