

Title: Diabetes Detection System - System Test Plan

1. Introduction

1.1 Purpose

The purpose of this document is to outline the test approach and plan for the Diabetes Detection System. The testing process aims to verify that the system functions as intended and accurately predicts the likelihood of an individual having diabetes based on their medical information.

1.2 References

The System Requirements Specification (SRS) document will be used as a reference for this test plan.

2. Test Plan Identifier

TP001-DiabetesDetection

3. Test Items

The test items for this plan include all the features and functionalities of the Diabetes Detection System, such as data collection, preprocessing, algorithm implementation, model training, model evaluation, and the user interface for input and prediction display.

4. Features to be Tested

All functionalities of the Diabetes Detection System will be tested, including:

- Data collection and preprocessing
- Naive Bayes algorithm implementation
- Decision Tree algorithm implementation
- Model training and evaluation
- Integration of models into the software application
- User interface for inputting medical information and receiving diabetes predictions

5. Features not to be Tested

Visual design elements such as color schemes, font sizes, and other UI/UX features unrelated to the core functionalities of the Diabetes Detection System will not be part of the testing process.

6. Test Approach

The chosen approach for testing the Diabetes Detection System is a combination of manual testing and automated testing where applicable. Manual testing will be conducted to validate the user interface and perform end-to-end testing. Automated testing will be used for evaluating the performance and accuracy of the trained models.

7. Pass/Fail Criteria

Each test case will have specific pass/fail criteria defined. The criteria will be based on the expected system behavior and accuracy of the diabetes predictions.

8. Suspension Criteria and Resumption Requirements

If critical defects are discovered during testing, the testing process may be suspended until the issues are resolved. Before resuming the testing process, it is mandatory to retest the affected areas and ensure that the identified defects have been resolved.

9. Test Deliverables

The test deliverables include:

- Test plan document
- Test cases and test scripts
- Test execution logs and results
- Defect reports
- Final test summary report

10. Environmental Needs

The Diabetes Detection System should be tested in an environment that meets the following requirements:

- Operating System: [Specify the targeted operating system(s) and version(s)]
- Programming Language: [Specify the programming language(s) and version(s)]
- Libraries and Frameworks: [Specify any specific libraries or frameworks required for the project]

11. Staffing and Training Needs

A testing team consisting of at least one tester is required. The tester should be trained on the functionalities and usage of the Diabetes Detection System.

12. Responsibilities

The testing team is responsible for:

- Performing test cases and test scripts
- Recording and reporting defects following the defined process
- Collaborating with the development team to address and resolve identified issues

13. Schedule

The testing schedule will be determined based on the project timeline and milestones. Start and end dates for each testing phase will be defined in coordination with the development team.

14. Planning Risks and Contingencies

Possible risks, such as defects or delays, may arise during the testing process. It is important to proactively identify and plan for such risks, including adjusting the testing schedule or allocating additional resources if necessary, to mitigate any potential impact on the project.

15. Approvals

The System Test Plan requires approval from the relevant stakeholders, including project managers, developers, and testers.

16. Glossary

- SRS: System Requirements Specification
- UI: User Interface
- UX: User Experience

17. Approvals: CVSN Reddy Sir