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**RV UNIVERSITY**

**Diabetes detection using Machine Learning algorithms**

**Software Requirements Specification**

**Version 1.0**

**07-06-2023**

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**Document Identification**

| Project Name | Diabetes detection using Machine Learning algorithms |
| --- | --- |
| Document Home | <> |
| Version No | 1.0 |
| Status | Revised |

**Document Revision History**

| **Version** | **Date** | **Description** | **Document owner / Modified by** |
| --- | --- | --- | --- |
| 1.0 | 07-06-2023 | Document created | K Akanksha Raju |

**Software Requirement Specification**

Test Plan Identifier

- To check the percentage of Diabetes, blood pressure glucose level in blood is required

1) References

- SRS (software requirement specification) document

2) Introduction

- A machine learning model is created to check if a person has Diabetes using a data where glucose and bp are features and diabetes as label. Using this data, a model is created for further uses.

3) Test Items

- Download data in CSV format

- Using pandas extract features and label from CSV file

- Build ML Model using ML Algorithm

- Predict and analyze

4) Software Risk Issues

-N/A

5) Features to be Tested

- Download data in CSV format

- Using pandas extract features and label from CSV file

- Build ML Model using ML Algorithm

- Predict and analyze

6) Features not to be Tested

-N/A

7) Approach

- To check the functionality/requirements by entering the bloop pressure and glucose level to get the required output

8) Item Pass/Fail Criteria

- To input and check if all the functionality/requirements is working and the desired output is given

9) Suspension Criteria and Resumption Requirements

- to suspend if any functionality/requirements method is not working up to the requirements

10) Test Deliverables

- System test plan, cases, scripts, automation, execution, summary report

11) Remaining Test Tasks

-N/A

12) Environmental Needs

-N/A

13) Staffing and Training Needs

- 1 people required to test the product

14) Responsibilities

- Report to be given about the process of the product

15) Schedule

- Start date of testing is 07-06-2023 to 12-06-2023

16) Planning Risks and Contingencies

- The machine used for testing is not working or not yet arrived

17) Approvals

-given by product manager if the product functionality is working without any error

18) Glossary

-SRS (software requirement specification)

Test cases

T\_diabetes\_1 = Take 45 as glucose and 63 as blood pressure as input and calculated output required is 1 else it is fail

T\_diabetes\_2 = Take 40 as glucose and 92 as blood pressure as input and calculated output required is 0 else it is fail

T\_diabetes\_3 = Take 40 as glucose and 50 as blood pressure as input and calculated output required is 0 else it is fail (Negative test case)

T\_diabetes\_4 = Take 40 as glucose and 200 as blood pressure as input and calculated output required is 0 else it is fail (Negative test case)

T\_diabetes\_5 = Take 20 as glucose and -10 as blood pressure as input and calculated output required is 0 else it is fail (Negative test case)