# TEST PLAN OUTLINE (IEEE 829 FORMAT)

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# IEEE TEST PLAN TEMPLATE

## TEST PLAN IDENTIFIER Testplan\_heartattack\_prediction

## REFERENCES

## SRS

## Test plan

## Heart attack dataset – heart.csv

## Colab – Heart attack

## INTRODUCTION

## Purpose of this system test plan document is to write the test cases, test scripts and test script automation for heart attack project.

## TEST ITEMS (FUNCTIONS)

## Following are the test items:

## Machine Learning Algorithms

## Decision Trees

## Random Forest

## Logistic Regression

## SVM – Support Vector Machine

## KNN – K Nearest Neighbors

## Naïve Bayes

## Deep Learning Algorithm

## DNN – Deep Neural Networks

## GUI

## SOFTWARE RISK ISSUES

## Not applicable

## FEATURES TO BE TESTED

## age

## sex

## cp

## trestbps

## fbs

## restecg

## thalach

## exang

## slope

## ca

## thal

## target

## GUI

## FEATURES NOT TO BE TESTED

## Not applicable

## APPROACH (STRATEGY)

## The following approach will be adopted for testing

## Invoke the GUI

## Through GUI give feature values equal to the number of features provided in the code. Check if it’s working or not

## Example: if the number of features in the code are 3 then user has to input exactly features values like age = 40, sex = 1(male), cp = 0

## If the input values are negative then an error is displayed.

## If the number of feature values from the user for testing are not equal to the number of features in the code then an error occurs.

## Finally test GUI

## ITEM PASS/FAIL CRITERIA

## If the accuracy predicted is closer to 1 then it’s considered to be a good model and if the accuracy is closer to 0 it’s preferred to tune the algorithm for better accuracy values. We need to tune test size plan and the training dataset. If the test size is less then the reliablity of accuracy is less i.e. because there is a lot of variability in the accuracy value of the dataset.

## For example, if the user has given more number of feature details then the accuracy of the dataset prediction is more i.e. if the user has

## given age as 30 and asked for target to predict 1 or 0 i.e. having a

## heart attack or not respectively is less accurate than a situation in which more features like age, sex, cp, etc. Are provided.

## It’s called pass-fail criteria for test case

## SUSPENSION CRITERIA AND RESUMPTION REQUIREMENTS

## We use following suspension criteria for test activities:

## For heart attack project if we write 20 test cases out of 25% cases fail then we suspend the testing and inform the developers.

## The developers have to enclose the built quality by tuning the algorithm and resume the testing.

## 11 TEST DELIVERABLES

## Test plan

## Test cases

## Test scripts

## Test script automation

## 12 REMAINING TEST TASKS

## Not applicable

## ENVIRONMENTAL NEEDS

## Not applicable

## STAFFING AND TRAINING NEEDS

## 1 test engineer for 1 week

## RESPONSIBILITIES

## Test team is responsible for all the providing’s and all the above deliverables.

## SCHEDULE

## Starts in 2nd Week of September and ends in last week of September

## 17 PLANNING RISKS AND CONTINGENCIES

## Not applicable

## APPROVALS

## Product manager

## Developer

## Customer

## GLOSSARY

## GUI – Graphical User Interface

## KNN – K Nearest Neighbors

## SVM - Support Vector Machine

## DNN – Deep Neural Network