CONTENTS

CHAPTER PAGE NO.

LIST OF FIGURES i

LIST OF TABLES ii

LIST OF SCREENS iii

LIST OF ABBREVATIONS iv

ABSTRACT

1. **INTRODUCTION 1**

1.1. ABOUT THE PROJECT 1

1.2. PROJECT DESCRIPTION 2

1.3. MODULES 2

**2. SYSTEM ANALYSIS 5**

2.1. DOMAIN ANALYSIS 5

2.2. REQUIREMENT ANALYSIS 5

2.2.1. Functional Requirements 5

2.2.2. Non-Functional Requirements 6

2.2.3. User Interfaces 6

2.2.4. Software Interfaces 6

2.2.5. Manpower Requirements 6

2.3. EXISTING SYSTEM 6

2.3.1. Disadvantages 6

2.4. PROPOSED SYSTEM 7

2.4.1. Advantages 7

**3. FEASIBILITY STUDY 8**

3.1. ECONOMICAL FEASIBILITY 8

3.2. TECHNICAL FEASIBILITY 8

3.3. SOCIAL FEASIBILITY 9

**4. SYSTEM REQUIREMENTS 10**

4.1. SOFTWARE REQUIREMENTS 10

4.2. HARDWARE REQUIREMENTS 10

**5. SYSTEM DESIGN 11**

5.1. UML DIAGRAMS INTRODUCTION 11

5.2. SYSTEM DESIGN ASPECTS 11

5.2.1. Design of Code 12

5.2.2. Design of Input 12

5.2.3. Design of Output 12

5.2.4. Design of Control 12

5.3. UML DIAGRAMS 13

5.3.1. Class Diagram 14

5.3.2. Use Case Diagram 15

5.3.3. Sequence Diagram 15

5.3.4. Activity Diagram 16

5.3.5. Data Flow Diagram 16

6. OVERVIEW OF TECHNOLOGIES 18

6.1. PYTHON 18

6.1.1. Features of Python 18

6.1.2. History of Python 19

6.2. HTML 19

6.2.1. HTML Tags 20

6.3. CSS 21

6.3.1. Types of CSS 21

6.4. FLASK WEB FRAMEWORK 22

6.5. MACHINE LEARNING 23

6.5.1. How does Machine Learning Work 23

6.5.2. Types of Machine Learning 24

6.5.3. Machine Learning Models 25

7. **IMPLEMENTATION 28**

**8. SOURCE CODE 32**

**9. TESTING 51**

9.1. SOFTWARE TESTING TECHNIQUES 51

9.1.1. Testing Objectives 51

9.1.2. Test Case Design 51

9.2. SOFTWARE TESTING STRATEGIES 52

9.2.1. Unit Testing 53

9.2.2. Integration Testing 53

9.2.3. Functional Testing 53

9.2.4. Validation Testing 54

9.2.5. System Testing 54

9.2.6. Acceptance Testing 54

9.2.7. Performance Testing 55

9.3. TEST CASES 55

**10. SCREENS 56**

**11. CONCLUSION 63**

**12. FUTURE SCOPE 64**

**REFERENCES**

**LIST OF FIGURES**

**FIG NO. NAME OF THE FIGURE PAGE NO.**

Fig 5.1. Class Diagram 14

Fig 5.2. Use Case Diagram 15

Fig 5.3. Sequence Diagram 15

Fig 5.4. Activity Diagram 16

Fig 5.5. Data Flow Diagram 17

Fig 6.1. Types of CSS 21

Fig 6.2. Learning Phase of Model 24

Fig 6.3. Prediction Phase of Model 24

Fig 6.4. Support Vector Machine 26

Fig 6.5. Naïve Bayes Classification 27

Fig 7. Structure of Decision Tree 29

i

**LIST OF TABLE**

**TABLE NO. NAME OF THE TABLE PAGE NO.**

Table 6.1. HTML Tags 20

Table 6.2. HTTP Methods 22

Table 9.1. Test Case Results 55

ii

**LIST OF SCREENS**

**SCREEN NO. SCREEN NAME PAGE NO.**

Screen 10.1: Reading Dataset 56

Screen 10.2: Implementing Decision Tree Classifier 56

Screen 10.3: Implementing Support Vector Machine 57

Screen 10.4: Implementing Naïve Bayes 57

Screen 10.5: Comparing Accuracies of different ML Algorithms

using Bar plot 58

Screen 10.6: Generating Decision Tree using Python 58

Screen 10.7: Home Page 59

Screen 10.8: Login Page 59

Screen 10.9: Select and Upload Dataset 60

Screen 10.10: Train the Model 60

Screen 10.11: Prediction Screen 61

**iii**

L**IST OF** **ABBREVIATIONS**

**ABBREVIATION FULL FORM**

GUI : Graphical User Interface

UML : Unified Modeling Language

API : Application Programming Interface

HTML : Hyper Text Markup Language

HTTP : Hyper Text Transfer Protocol

URL : Uniform Resource Locator

SVM : Support Vector Machine

KNN : K-Nearest Neighbours

ANN : Artificial Neural Networks

CART : Classification And Regression Algorithm

ID3 : Iterative Dichotomiser 3

GPL : General Public License

DFD : Data Flow Diagram

WWW : World Wide Web

CSV : Comma Separated Values

**iv**