

**A**

**PROJECT DESIGN REPORT**

**ON**

**“HEALTH DISEASE PREDICTION**

For the subject **Lab 1: Project Phase 1**

Submitted in partial fulfillment of the requirement for the award of

**Bachelor of Technology**

**In**

**Computer Science and Engineering**

**Punyashlok Ahilyadevi Holkar Solapur University**

By

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Under Guidance of

**Prof. Mr. M.A. Mahant Sir**

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**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**WALCHAND INSTITUE OF TECHNOLOGY**

**SOLAPUR - 413006**

**(2022-23)**



**CERTIFICATE**

This is to certify that the Project entitled

**“HEALTH DISEASE PREDICTION”**

is

Submitted by

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as a part of Project Design Report.

Studying in B.Tech CSE for the subject **Lab1 Project Phase 1**

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1. **Abstract**

Disease Prediction using Machine Learning is the system that is use from the symptoms which are given by the patients or any user. The system processes the symptoms provided by the user as input and gives the output as the probability of the disease. Naive Bayes classifier is used in the prediction of the disease which is a supervised machine learning algorithm. The probability of the disease is calculated by the Naive Bayes algorithm. With an increase in a biomedical and healthcare data. Accurate analysis of medical data benefits early disease and patient care. By using linear regression and decision tree we are predicting disease like Diabetes, Malaria, Jaundice ,Dengue and Tuberculosis.

1. **Introduction**

Machine learning is the domain that use past data for predicting. Machine learning is the understanding of computer system under which the machine learning model learn from data and experience. The machine learning algorithm as two phase:1) Training and 2)Testing to predict the disease from a patient’s symptoms and from the history of the patient, machine learning technology is struggling from past decades. Healthcare issue can be solved efficiently by using machine learning technology. We are applying complete machine learning concepts to keep the track of patient’s health.

1. **Background Study**

Disease prediction using patient treatment history and health data by applying data mining and machine learning techniques is ongoing struggle for the past decades. Many works have been applied data mining techniques to pathological data or medical profiles for prediction of specific diseases. These approaches tried to predict the reoccurrence of disease. Also, some approaches try to do prediction on control and progression of disease. The recent success of deep learning in disparate areas of machine learning has driven a shift towards machine learning models that can learn rich, hierarchical representations of raw data with little preprocessing and produce more accurate results. Numbers of papers have been published on several data mining techniques for diagnosis of heart disease such as Decision Tree, Naive Bayes, neural network, kernel density, automatically defined groups, bagging algorithm and support vector machine showing different levels of accuracies in diseases prediction. In this type of research generally used tool is Waikato Environment for Knowledge Analysis (WEKA).

1. **Technologies Required**

* **Software:-**
* Python 3.0 and above
* Jupyter Notebook
* Kaggle for dataset
* Visual Studio
* Flask
* Heroku
* Github
* **Hardware:-**
* System: Any Desktop/Laptop
* Sytsem with below Configration or higher level.
* Hard disk:500GB
* RAM:4GB

1. **Proposed Work**

**Attribute**

**solution**

**Preprocessing on Data**

**Classification Technique**

**Disease Prediction**

**Dataset**

**Result negative**

**Result Positive**

**6. Advantages of Project**

**7. UML diagrams**

All required UML diagrams.

Refer the link below for more information on UML diagrams. <http://agilemodeling.com/essays/umlDiagrams.htm>

**8. Work Planned for Next Semester**

A project plan outlines in specific detail how a project will be conducted, who will work on which part, and when and in what order each part will be accomplished.

**9. Conclusion/Summary**

The main aim of disease prediction system is to predict the disease on the basis of the symptoms. This system takes the symptoms of the user from which he or she suffers as input and generate final output as a prediction of disease. Average prediction accuracy probability of 100% is obtained. Disease predictor was successfully implemented using the grails framework. This system gives a user-friendly environment and easy to use.

As the system is based on the web application, the user can use this system from anywhere and at any time. In conclusion, for disease risk modeling, the accuracy of risk prediction depend on the diversity feature of the hospital data.

This systematic review aims to determine the performance, limitation, and future use of software in health care. Findings may help inform future developer of Disease predictability software and promote personalized patient care. The program predicts patient Diseases. Disease prediction is done through use Symbols.

**10. References**

Should be in Scholar APA format

(Include all the internet resources which helped you in im

plementing your project)(minimum 10)