

Smart Healthcare System

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Abstract— Classical diagnosis is a process in which a medical practitioner examines the body of a patient for any possible signs or symptoms of a medical condition, undergo various medical examinations, and then conclude. This is often challenging because many signs and symptoms are nonspecific. Medical facilities must be advanced so that better decisions for patient diagnosis and treatment options can be created. Machine learning allows models to rapidly analyze data, and deliver results, leveraging both historical and real-time data. Healthcare service providers can make better decisions on patient's diagnoses and treatment options, which will end up in overall improvement of healthcare services and thereby increasing patient satisfaction. By this project, we are trying to implement functionalities of machine learning in healthcare within a single system. Some cases can occur when an early diagnosis of a disease is not within immediate reach. In such cases, this system can be effectively implemented. As widely said, "Prevention is best than cure", prediction of diseases and epidemic outbreak would lead to early prevention of an occurrence of a disease. This project mainly focuses on the development of a system, or we could say an immediate medical provision that would incorporate the symptoms and other medical data collected from the patient and store them into a Smart health dataset. This dataset would then be analyzed using the Naïve Bayesian machine learning algorithm to deliver results with maximum accuracy. GPS tracking will be used to suggest nearest doctor or specialist if the patient needs referral. This system will have the capacity to reduce costs of treatment, predict outbreaks of epidemics, avoid preventable diseases and improve the quality of life. Patients can seek information regarding diseases, pathological tests referred, get answer to any kind of question and solve any problem related to the disease.

I. INTRODUCTION

In India more than 70% of people in India are prone to general body diseases like viral, flu, cough, cold, etc. in every 2 months. Because many of us do not realize that the overall body diseases might be symptoms to something more harmful, 25 you look after the population succumbs to death due to ignoring the early general body symptoms. This could be a dangerous situation for the population and can be are alarming. Hence identifying or predicting the disease at the earliest is extremely

important to avoid any unwanted casualties. The currently available systems are the systems that are either dedicated to a specific disease or are in research phase for algorithms when it involves generalized disease [1].

II. AIMS AND OBJECTIVES

The purpose of this technique is to supply prediction for the overall and more commonly occurring disease that when unchecked can become fatal disease. The system applies data mining techniques and Naïve Bayesian algorithm. This system will predict the most probable disease supporting the given symptoms and measures required to avoid the hostility of disease. In this project, the system will be trained using machine learning.

III. LITERATURE REVIEW

1. EXISTING SYSTEM

The current system is a manual system where the patient visits a doctor to get diagnosed. Also records of patients and their medical conditions are just maintained on paper. This process is quite time consuming and it is also not possible for everyone to identify their diseases at their home easily. Some sources available as individual prediction or recommendation system are not integrated together and their efficiency in clinical settings is still debatable [2]. Also there exists no system to recommend various pathological tests.

2. PROPOSED SYSTEM

A computer aided system to use intelligent machine learning techniques to predict the most accurate illness based on the inputted symptoms. It also consist of doctor recommendation system, which will help the patient locate a doctor in the nearest locality who is an expert in the domain of disease suggested. The system would also maintain a database of the patients which contains medical details of the patient. This medical expertise system also aims to predict the outbreak of any disease

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