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**PROJECT PROPOSAL:**

**A WEB APPLICATION TO ASSIST PHYSICIANS PERFORM DIAGNOSIS ON THEIR PATIENTS**

**INTRODUCTION**

“Big Data”, a term that has marveled high-tech and health care industries in this generation of ours. The ability to collect and intelligently analyze patient data, from their DNA sequence to their vital signs, promises to revolutionize both the delivery of healthcare and understanding of the human body. Aggregating information from thousands of patients records can provide useful insights for medical practitioners.

Data gathered can be used to predict a patient’s illness based on symptoms the patient reveals to the doctor or ones the doctor observes after careful examination.

A study conducted by New York University’s Center for Health and Public Service Research in 2008 shows that about 44% of Emergency Room (ER) visits are unnecessary.

**AIMS & OBJECTIVES**

This project aims to develop a web based application that will be used by physicians of the University Hospital, Legon to predict a student’s illness.

The application will rely heavily on students past medical records to aid in better disease prediction.

The application will calculate the frequencies of symptoms and diseases from clinical data and uses that past data to inform a prediction about what could be wrong.

Patients suffering from certain common diseases do not necessarily have to go through ER or perform a lot of laboratory tests to help identify their illness. Instead, with the help of the application, the symptoms patients are suffering from will be fed into the system by the physician and right there, their medications can be prescribed.

This approach will not only save the patient’s time but also reduce cost he/she may incur when undergoing these laboratory tests.

**PROJECT SCOPE**

The focus of this project is to develop the application for the University Hospital, Legon.

**PROJECT LIMITATION**

In the case where symptoms of very rare illnesses are provided as input, the application would find it hard to accurately predict the disease.

**METHODOLOGY**

The application will be developed using R programming language.

R Shiny, an R application package will be used to develop the front end or the user interface.

Patients medical records will be collected from the University Hospital, Legon.