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# Analysis on Medicine and Doctor Availability in Government Hospitals

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**Abstract:** Government hospitals provides medicines for the treatment to the patients based on the diagnosis. Generally government hospitals stores all the patients historical data and current data in cloud. In our system user can register with there details, which is stored to the admin's database. This system allows the user to view the hospital location using predictive algorithm and details about the hospital such as doctors, medicines, specialists availability and also helps the patient to get details about the government hospitals. Financial and administrative performance are improved by high utilization of resources and reduced fraud and abuses and optimized by supply chain and human capital management

**Keywords:** Predictive analysis, government hospital, data analytic

## I. INTRODUCTION

Government hospitals provide medicines for the treatment to the patients based on the diagnosis. During the peak time of a disease, some medicines are not available in the hospital. Based on patient's historical and current data, system can generate a report on what all medicines should be available in the hospital and in what quantity at particular time and location of the hospital. Doctors and specialists availability needs to be managed as per the inflow of patients. Many times patients do not find the required doctor during the peak of a disease or shortage of doctors in a hospital. Based on patient inflow for a particular ailment or disease, historical data and current data, system could generate the requirement of number of doctors required in a hospital on daily basis and also during a peak of a disease. Many times, doctors are not available when patients needs them more, e.g. on weekends, holidays, evenings etc.

## II. LITERATURE REVIEW

### A. Big Data Analysis Inferential And Predictive Methods

Big data analysis efforts identify drivers related to loss and momentum and to inform. Government hospital voluntarily contributes de-identified records to create a single federated database. Identify common variable likely to influence retention and progression and measure the degree of influences. It is crucial to find way of systematic approach to manage integrate analyse interpret such large complex data sets.

## III. PROBLEM STATEMENT

Development of a Healthcare Information system to provide analysis on Medicines availability in Government hospitals and analysis on increasing the efficiency of the hospital by managing availability of doctors and specialists. Analytics to bring in efficiency in Operational functioning by Medicine, number of doctors and specialists availability in Government hospitals.

## IV. METHODOLOGY USED

### A. HTML

HYPERTEXT MARKUP LANGUAGE is the standard mark-up language use for creating web page. HTML written from HTML ELEMENT consisting of tag in angle bracket. HTML consists of opening and closing tags. In HTML all tags are pre-defined tags. HTML element from building block all the website. HTML allow the image and object to be embedded and can used to create interactive forms.

### B. Cascading Style Sheet (CSS)

It is the style sheet language used for describing look and formatting of documents written in the mark up language. css can be acts as interface written in HTML and XHTML languages. CSS is designed to enable the separation of presentation and content, including layout, colours and fonts. css files reduce the complexity and repetition in structural content.

### C. MYSQL

MYSQL is developed, distributed and structured in Oracle Corporation. MYSQL is database system used on web it runs on server .MYSQL is ideal for both large and small application. It is very fast, reliable and easy to use. It support standard SQL. MYSQL can be compiled on the number of platform

### D. Java Script

JavaScript is the scripting language of the Web. All modern HTML pages are using JavaScript. A scripting language is a lightweight programming language. JavaScript code can be inserted into any HTML page, and it can be executed by all types of web browsers. JavaScript is easy to learn.

## V. IMPLEMENTATION

### A. R Language

R language is used for statistical environment computing and graphics .R language is provide wide variety of statistical and graphical technique and highly extensible. R is an integrated suite of software facilities for data manipulation, calculation and graphical display. For computationally-intensive tasks, C, C++ and Fortran code can be linked and called at run time. Advanced users can write C code to manipulate R objects directly. A well-developed, simple and effective programming language which includes conditionals, loops, user-defined recursive functions and input and output facilities.

- 1) *Program*: R is a clear and accessible programming tool
- 2) *Transform*: R is made up of a collection of libraries designed specifically for data science
- 3) *Discover*: Investigate the data, refine your hypothesis and analyse them.
- 4) *Model*: R provides a wide array of tools to capture the right model for your data.
- 5) *Communicate*: Integrate codes, graphs, and outputs to a report with R Markdown or build Shiny apps to share with the world.

### B. Predictive Analytics

Predictive analytics is the use of data, statistical algorithm and machine-learning techniques to identify the likelihood of future outcomes based on historical data. Predictive models use know results to develop a model that can be used to predict values for different or new data. The modelling results in predictions that represent a probability values for different or new data. The predictive analytics used to predict trends, improve performance, drive decision making, and predict the behaviour.

- 1) *Random Forest Algorithm*: Random Forest is a flexible, easy to use machine learning algorithm that produces, even without hyper-parameter tuning, a great result most of the time. It is also one of the most used algorithms, because it's simplicity and the fact that it can be used for both classification and regression tasks. In this post, you are going to learn, how the random forest algorithm works and several other important things about it.

## VI. CONCLUSION

Since we are entering the patient details based on the past history of patients diagnosis report in government hospitals. Using this application we can retrieve patient's history with a single click. Thus processing information will be faster. By using predictive analysis algorithm patient can access the current location anywhere. This application reduces the human effort and increase the efficiency of the government hospital.

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