

# Private Hospital Finder

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**Abstract**—The development of this project is meant to serve as a general reference for you in the case that you require emergency medical care, particularly for a condition like pandemic. This website app essentially lists the top hospitals in Chennai City that are close to you. Several private hospitals charge exorbitant rates during emergency and epidemic circumstances by taking advantage of the circumstance. To make it easier for users to locate hospitals.

**Keywords**—HTML, API, CSS

## I. INTRODUCTION

The WHO has said that, about ½ of the whole population today lives in countries with a lack of access to high-quality healthcare (WHO). In actuality, according to the WHO, just 8% of the world's population has access to basic medical care. It's crucial to locate a reputable hospital that offers high-quality care if you want to make sure that everyone receives the greatest possible healthcare. Locating a closest hospital is also crucial. Some might be far and others might be found in urban areas. So that you won't have to worry about getting sick while you're there, make sure the hospital isn't too far from your house. Thus, it is crucial to select the best hospital for your their locations and the treatments they offer, this project comprises hospital registration, saving their information in the system, and mentioning the availability of beds, treatments offered, ambulance service, and other services offered. PHP, Html, CSS, and JavaScript will be utilized for the application's front end, and Java technology and APIs will be used for the back-end processing.

Average length of stay for hospital patients, and encouraged interdisciplinary collaboration across departments.

System for scheduling hospitals that uses multi-agent correlation. In order to support hospital planning decisions, the hospital must organise a greater expansion in the interaction between physicians, hospital's resources, care staff, and users. The need of this work is to give a system for planning hospitals. This employed data set, which contains about 110,500 medical appointments with the about 15 important characteristics, was assessed based on patient's arrival, waiting, and completion time. Following hospital sections employ a few of these variables: For the best price for hospital scheduling, diseases including hypertension, diabetes, and alcoholism add needs.

The main goal of this project is to search hospitals based on specialised diagnoses, use hospital locations, bed

availability, and ambulance service to accelerate your search for the closest hospital using KNN algorithm, and store the data of Private Hospitals that are being updated by hospital administrators to improve the user's search for hospitals. There are several excellent hospitals that use cutting-edge medical technology and equipment in addition to the best medical professionals to deliver top-notch care. Finding a good hospital that offers high-quality care is crucial if this effort is top percentage of priorities to each patient's appointment. A simulation-based strategy is suggested for managing hospital schedules.

Precise predictions of the inpatient bed capacity are particularly crucial for capacity reserve at hospitals where judgements about acceptable rates of elective admissions are established in advance based on anticipated available bed capacity and emergency requests. The patient's prediction who will be discharged the following day can be used to establish the bed capacity for that day given the number of available beds. The quirks of daily discharge variations, make it difficult to choose the best options, even if time-guarantee that everyone receives the greatest possible healthcare.

## II. RELATED WORK

Hospital information systems, one of the important subfields of medical informatics, are intended to link all hospital departments to a wide information network in order to streamline the entire hospital system, according to the International Academic Community. The HID-Hospital information department used the Oracle database to create a number of secure, dependable, and user-friendly beds resource management information systems in response to the difficulty in receiving medical care in China. This article describes the functional requirements for HIS. This strategy enhanced the efficiency of bed resource management, considerably decreased the series models may capture these qualities effectively. A seasonal regression and ARIMA model, a seasonal ARIMA multiplicative model, and a combinatorial model based on weighted Markov Chain models are all investigated in this paper. These simulations aim to predict daily outflows. The models are calibrated using hospital discharge data spanning three years.

For the hospital triaging system, they have created a mobile application and desktop platform. The process of triaging involves ranking the priority of a patient's care at a hospital. Triage profiles for patients, which include name, age, gender, medical data, and triage category, can be stored in and accessed by the system's knowledge base. Many user experience features built into the created graphical user interface (GUI) make the system simpler to operate. Both

desktop and mobile devices can use the system because it has been turned into an application.

Registered nurses used the application to test it out by using it to respond to sets of questions that included walk-in patient triage scenarios. The nurses' opinion was mostly positive, stating that the software made the process more efficient than it would have been if it had been done manually.

This article discusses the best patient scheduling issue with targeted acceptance ratios as well as the best inpatient room allocation for a variety of patients in public hospitals. Hospitals must limit patient access and distribute limited resources across a range of patient categories in order to maximise hospital income and preserve service equity. Two steps are taken to present the models for the problem. Our model takes into account any variations in patient arrival and stay times. By employing a simulation model and a linearization technique to reformulate the constraints as the constraints of knapsack, we are able to solve this problem. CPLEX.

The paper provides a distributed, integrated framework for the Hospital's in National Taiwan University Hospital Information Systems (HIS) and Healthcare Enterprise Information Portal (HEIP) (NTUH). A single solution has been created for the customer relationship management system for a Hospital, offered by HEIP. The latest HIS outpatient information systems (OIS) are discussed in terms of their results. Future HEIP initiatives are mentioned, including e-learning, RCD, and online immunisation programmes. Also offered are middleware-based integrated HEIP and HIS designs and practical fixes. To assess the performance of the architecture. Almost 25 years ago, the hierarchical IMSDB databases and IBM/SNA were used to develop the healthcare information system (HIS) for the National Taiwan University Hospital (NTUH).

The prevalent poor management of hospitals has recently come to light because to First Come, First Serve (FCFS) hospital bed rules. Importantly, the General Utility Function is used by our proposed system to decide the hospitalisation orders of patients. We employ our own TOPOSIS Method that is Modified as the assessment method for the Six-stage HBAMS, with the Monte Carlo Simulation Algorithm serving as a second layer of verification. The results show that this system is an effective method for addressing the poorly situated hospital beds that currently exist. We provide is then used to solve the deterministic programming model that is hospital administration with a mechanism to adapt the model to the reproduced from the challenging NSP model. In addition, we provide a mixed-integer two-stage stochastic programme and a target programme to optimize the patient scheduling based on allotted capacity and anticipated AR.

Lower death rates are a positive indicator of a nation's efficient healthcare system. To reduce the fatality rate, a critical patient should be transferred as quickly as possible to a hospital with the required tools. It is not necessary to emphasise the importance of Golden Hour in cases of traffic accidents. To do this, ambulances should be able to travel

freely on our highways. The autonomous ambulance management system uses the internet of things. This will find the nearest hospital, determine the quickest way, provide critical information to the hospital beforehand, and control the traffic signal as well to ensure that the ambulance can move forward without incident. An effective and successful way to contribute to lifesaving acts in order for the Six-stage HBAMS to be extensively deployed.

[1] The electronic ward bulletin board system and the self-service guidance system are now part of the standard hospital information system (HIS). The touch screen for the self-service guide system could be positioned in the outpatient lobby. Patients benefit from choosing and finding a doctor or specialist based on where they are ill. Visitors can access the ward's electronic bulletin board system to learn about visitation times and other safety information. The idea of pervasive computing makes it possible to combine actual healthcare services with online informational offerings. After then, patients could easily access information services. The Hospital Information System will function better as a result, increasing efficiency and service quality. By pervasive computing, information and computing are incorporated into people's homes. As a result, the virtual world in the information realm and our physical world converge. Information and computing services are available to residents whenever and wherever they need them. There are numerous online services available in almost every business thanks to contemporary web technologies. Every major sector is converting to digital and building a digital face for all of its fundamental operations in order to compete more effectively in the expanding digital market. Using duplicate approaches will not benefit either the individual or the organisation in the modern environment due to the highly quick flow of information. Internet access is a requirement for all contemporary enterprises that want to operate effectively. One of these industries where information should be swiftly and effectively digitised is healthcare. This research focuses on that particular problem and paves the way for the creation of software that makes it easier to convert paper-based documents to electronic ones. The article suggests E-Medical Management, which would increase the efficiency of patient management, doctor scheduling, and provide access to patient data to all hospital staff, and describes a plan for a web-based platform that would replace the need for paper prescriptions in hospitals.

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documents to electronic ones. The article describes a proposal for a web-based platform that would replace the need for paper prescriptions in hospitals and suggests E-Medical Management, which would improve the effectiveness of patient management, doctor scheduling, and give access to patient data to all hospital employees.

[3] India's health care system, like those of many other nations, is dealing with an increase in the demand for medical services and care. The full medical history of the patient must be included in the medical records. Because this record serves many objectives, doctors must keep perfect records. In order to address the issues associated with the manual technique, this study on hospital management systems is intended to convert the manual way of looking for, classifying, storing, and retrieving hospital information (files) into an electronic medical record. After researching the current system, computer-based software was developed to take the role of this manual process. As patients enter and exit the hospital, these computer-based systems generate patient reports.

[4] A computerised or web-based system called a hospital management system makes it easier to oversee how a hospital or other medical facility runs. This programme or technology will assist in making the entire operation paperless. It incorporates all patient, physician, hospital administrative, etc. information into a single piece of software. It has sections for the many types of hospital personnel. The receptionist can immediately check the availability of rooms and beds using HMS in order to change patient transfers from one ward to another or assign the bed to the incoming patient. To keep tabs on patients who have been discharged, this data is updated continuously. The comprehensive schedule for the operation theatres is also included in this section. Knowing assists the front desk agent or the nurses.

[5] An intelligent HMS was developed for the benefit of patient's checking in at a hospital. They will have access to information about the doctor's, appointment times, relevant offices, laboratory testing, and specific medications for his or her condition. At the hospital entrance, the system will offer patients an intelligent front desk information service. Also, it will give doctors software aid so they can diagnose quickly and efficiently by utilising the program's decision-making process. A hospital's administrative, financial, and clinical aspects are managed by the developed system, a thorough and integrated information system. The system seeks to provide the greatest electronic data processing assistance for patient care and administration as a subfield of medical informatics. This includes both electronic and mechanical data processing as well as information processing on paper.

[6] Many benefits of an advanced hospital management system include improved patient care, strict cost control, enhanced profitability, and better administration and control. IHMS was created and intended to provide hospitals with quantifiable benefits. It is strong, adaptable, and simple to use. More significantly, it rests on solid and trustworthy foundations. The object-oriented, networking, and database ideas are the foundation of the "Advanced Hospital

Management System" project. We employ MY SQL software, one of the greatest and most user-friendly programmes, even though we maintain records in databases across a range of fields. The front-end software for the project is created in Java, an Object-Oriented Programming language with MY SQL support. To address the requirements of big and mid-sized hospitals worldwide, the Advanced Hospital Management System was developed. All of the necessary modules and functionalities have been developed with your requirements in mind. Customers in India and abroad have largely approved of this bundle.

[7] The objective of this article is to automate hospital front office management through the development of user-friendly, efficient, and inexpensive software. It focuses on gathering patient data, including details on diagnoses, etc. In the past, it was manual. The objective of the system is to enter, store, and retrieve patient and physician data as needed, as well as to modify this data in an usable manner. Data pertinent to the patient and diagnostic make up the system input, and the system output are the details which are shown on the screen. The HMS can only be accessed with the proper credentials. It is accessible to administrators and front-desk employees. Only they have the ability to add information to the database. Access to the information is simple. Data processing is quick since the data is securely safeguarded for personal use. The human body is highly clever and complex structure that performs millions of functions. He was able to understand all of these complex activities through his research and tests.

[8] To manage daily operations and hospital activities, a well-organized computerised system known as a "hospital management system" was built. The application can handle inpatients, outpatients, records, database treatments, status ailments, pharmacy billings, and labs. It also records hospital information such as ward IDs, in-charge physicians, and department administrators. Receiving a report after a consultation is currently the biggest problem facing patients. Patients cannot view hospital records outside the building, despite the fact that many hospitals maintain reports in their systems. We will offer the option to store the report in a database as part of this project, making it accessible from anywhere in the world. The hospital management system project involves data storage, lab and pharmacy automated billing, and patient registration. The software, which also automatically stores staff and patient information, can provide each patient with a unique ID. You can use the search option to see the current performance of each room.

[9] Nowadays, web-based technology provides a wide range of online services in nearly every industry. As almost everything can be done online, less tasks, expenses, and efforts are involved. The idea of a web platform that would provide access to various medical and hospital processes online using Web, networking technologies is discussed in the article. This platform could be crucial in implementing the capabilities of online medical administration. This will aid in the administration of patients, the management of doctor schedules, and the maintenance of patient data that are accessible throughout the hospital. online patient data

storage, management, communication, analysis, and updating.

[10] A smart hospital system is a part of the infrastructure whose efficient operation, upkeep, and maintenance heavily rely on the actual resources made available to them. This paper's goal is to outline the technological foundations for a smart hospital management system. In fact, widespread adoption of IOT has a significant impact on raising hospital administration standards, enhancing patient convenience, and enhancing medical treatment quality. Then, a review of the smart hospital system is given, along with various approaches for analysis and modeling. Smart systems integrate sensor, actuators, and control capabilities so that the characterise and evaluate a condition and make decisions based on the availability of data in a adaptive way. A healthcare system is actually an arrangement of individuals, organizations, and assets that provide health services to fulfill the needs of target populations. The public's opinion of healthcare is evolving quickly as a result of medical advances.

[11] In Oman, there are numerous private hospitals. Several hospitals have their own web-based programmes that manage patient appointments and provide information on the services the hospital offers. Yet, there isn't a web-based tool that offers a standard, integrated platform for comparing the services offered by different hospitals and managing patients' doctor visits. The goal of this study paper is to integrate the services offered by several private hospitals. The aim of this project is developing a web-based application prototype and offer an implementation plan for creating an integrated solution. By allowing patients to quickly compare the services of several hospitals and select the hospital of their choice by conveniently scheduling appointments from their homes and avoiding lengthy waiting lines at hospitals, this research aims to serve the community in Oman. The proposed prototype system may track a patient's medical history and handle the details of their therapy.

[12] A state-of-the-art database idea that includes patient and hospital's details. It is a particular type of database that also records patient data. Record manipulation can be prevented by utilising this concept. The potential of losing crucial data exists, but by putting this idea into practise, we can maintain a backup of all data. Also, the data are completely safeguarded. Data must be made accessible in a way that everyone may use it. Every single patient will have their own unique ID and password. Updates are also made to the patient's registration form, which includes the patient's name, address, phone number, and date of birth. The data will be shared throughout hospitals, and each patient will have access to their own personal information. Hospital management is related to the integrated hospital information system, which encompasses every operational aspect of multi-specialty hospitals. Aspects of hospital administration include improved patient's care, safety, confidentiality, effectiveness, and a better management information system.

### III. SYSTEM ARCHITECTURE

In order to improve the user's ability to search for hospitals, the suggested system seeks to store Private Hospitals' information as it is updated by hospital administrators. Search hospitals based on the specialised diagnosis, use hospital locations as an input to the KNN algorithm, bed availability, doctor availability, quality of the doctor's care provided, success rate of the operations performed by the respective doctors, success rate of the hospital, and ambulance service which are the key factors to speed up your search for the best nearby hospital.

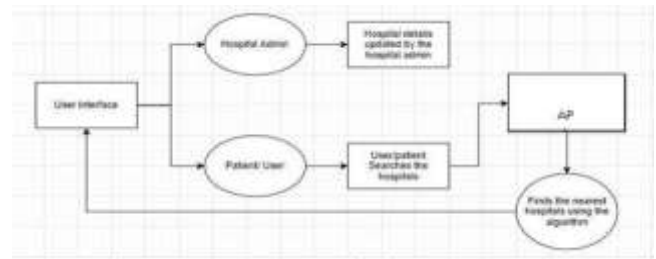


Fig. 1. System Architecture

### IV. RESULTS

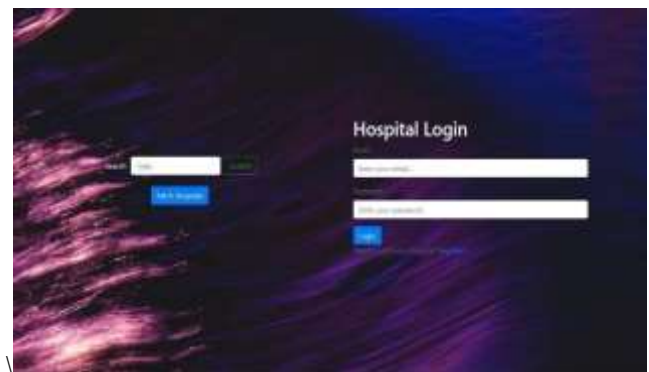


Fig2. Home page

The Home page or the index page is the heart of the system since the whole process starts from this page. It consists of three fields and four buttons where one field is used of searching the hospitals based on the name ,treatment and diagnostics provided and submit button triggers the keyword search and the Fetch hospitals button will provide all the hospital's details which will be sorted so that the nearest hospital will be viewed first. On the other side there are the fields required for the hospital admin's for logging into the system by providing the required credentials and the Register button will be used by the hospital's admin to register their hospital into our system for the first time.



Fig. 3. Admin page

In the admin page the current details of the hospital will be available along with the option to update the details of the hospital such as treatments provided, diagnostics provided, availability of ambulances and beds, details of the doctors working in that hospital and the location of the hospital.



Fig. 4 User's Page

In this page the details required by the user or patient will be provided with accurate location and even the direction to that hospital is provided using the google map.

## V. CONCLUSIONS

This study focused on the hospital management system, which enables users to look up patient records at the closest hospitals. The significance of time is now complete. The database aims to cut down on the patient's time spent looking up hospitals for their particular therapy. Also, this lowered the amount of space the data took up and gave the patient's medical records acceptable protection. According to the study's findings, the problem with the existing manual approach of manually searching the hospital will be solved by the design of hospital database records.

## REFERENCE

1. E.T. Brannigan, Eleanor Murray, and A. Holmes, "Where does infection control fit into a hospital management structure?," *Journal of Hospital Infection* vol. 73.4, pp. 392-396, 2009.
2. Cincar, and Kristijan, "Hospital Management and Scheduling with Multi Agents Approach," 2020 International Conference on e-Health and Bioengineering (EHB). IEEE, 2020.
3. Devi, S. Sharmila, et al., "User Interactive Hospital Management System by using Web application," 2021 Second International Conference on Electronics and Sustainable Communication Systems (ICESC), IEEE, 2021
4. Gadhari, H. Digvijay, P. YadnyeshKadam, and Parineeta Suman, "Hospital Management System," *International Journal for Research in Engineering Application & Management (IJREAM)*, ISSN, pp. 2494-9150, 2015.
5. Hsieh, Sheau-Ling, et al., "An integrated healthcare enterprise information portal and healthcare information system framework," 2006 International Conference of the IEEE Engineering in Medicine and Biology Society, IEEE, 2006.
6. Rajesh, M., &Sitharthan, R. (2022). Image fusion and enhancement based on energy of the pixel using Deep Convolutional Neural Network. *Multimedia Tools and Applications*, 81(1), 873-885.
7. Moshika, A., Thirumaran, M., Natarajan, B., Andal, K., Sambasivam, G., &Manoharan, R. (2021). Vulnerability assessment in heterogeneous web environment using probabilistic arithmetic automata. *IEEE Access*, 9, 74659-74673.
8. Lakhous, and Najeh, "Review on smart hospital management system technologies," *Res. & Sci. Today*, vol. 17, p. 187, 2019.
9. Luta, G. Raphael Benedict, G. RenannBaldovino, and T. NiloBugtai, "Design of a Mobile and Desktop Application Platform for Hospital Triaging System," 2018 IEEE 10th International Conference on Humanoid, Nanotechnology, Information Technology, Communication and Control, Environment and Management (HNICEM), IEEE, 2018
10. Misal, RohitGopal, et al., "Advanced Hospital Management System".
11. Ren, Lu, et al., "Design of hospital beds center management information system based on HIS," 2017 IEEE International Conference on Bioinformatics and Biomedicine (BIBM), IEEE, 2017.
12. Saimanoj, Kotapati, et al., "Hospital Management System using Web Technology," *The Mattingley Publishing Co. Inc.*, ISSN, pp. 0193-4120, 2020.
13. Shih, Sung-Tsun, Chin-Ming Hsu, and Chian-Yi Chao, "Self healthcare management system based on RFID technology," *The 7th International Conference on Networked Computing and Advanced Information Management*. IEEE, 2011.
14. Al Habsi, Maha Mohamed Ahmed, and Syed Ateeq Ahmed, "Integrated Hospital Management System," *Journal of Student Research* 2017.
15. Xiaolan, Wang, Xian Dapeng, and He Hong, "Improved Services in Hospital Information System," 2010 International Forum on Information Technology and Applications, IEEE, vol. 2, 2010.
16. Yadav, Pulendra Kumar, and Rikesh Kumar, "Online Hospital Management System," Available at SSRN 4104606, 2022.
17. Yadav, Gunjan, et al., "Advanced Hospital Database Management System," *Int. J. Adv. Res. Comput. Commun. Eng.*, vol. 5.4, pp. 221-223, 2016.
18. Yang, Guan-Dao, Lu Sun, and Xiao Liu, "Six-stage Hospital Beds Arrangement Management System," 2010 International Conference on Management and Service Science, IEEE, 2010.
19. Zhou, Liping, et al., "Public hospital inpatient room allocation and patient scheduling considering equity," *IEEE Transactions on Automation Science and Engineering*, vol. 17.3, pp. 1124-1139, 2019.
20. Zhu, Ting, et al., "Time-series approaches for forecasting the number of hospital daily discharged inpatients," *IEEE journal of biomedical and health informatics*, vol. 21.2, pp. 515- 526, 2015.