Using E-Health Care System for online patient care.

PROJECT TOPIC DESCRIPTION

What is EHR?

An electronic health record (EHR) is a digital version of a patient's paper chart. EHRs are real-time, patient-centered records that make information available instantly and securely to authorized users. While an EHR does contain the medical and treatment histories of patients, an EHR system is built to go beyond standard clinical data collected in a provider's office and can be inclusive of a broader view of a patient's care. EHRs are a vital part of health IT and can:

- Contain a patient's medical history, diagnoses, medications, treatment plans, immunization dates, allergies, radiology images, and laboratory and test results
- Allow access to evidence-based tools that providers can use to make decisions about a patient's care
- Automate and streamline provider workflow

One of the key features of an EHR is that health information can be created and managed by authorized providers in a digital format capable of being shared with other providers across more than one health care organization. EHRs are built to share information with other health care providers and organizations – such as laboratories, specialists, medical imaging facilities, pharmacies, emergency facilities, and school and workplace clinics – so they contain information from *all clinicians involved in a patient's care*.

With EHRs, your organization can help build a healthier future for our nation.

What is Patient Safety?

Patient safety is the absence of preventable harm to a patient during the process of healthcare and the reduction of risk of unnecessary harm associated with healthcare to an acceptable minimum. Diseases can be missed in the early stages if doctors and nurses aren't looking for it and it has been reported that early detection is often missed by the hospital emergency department or doctor's office. For some, it's not noticed during subsequent visits either. A missed diagnosis is a medical error and can be prevented. Hence it is essential to develop and implement strategies to predict the likelihood of the onset of disturbances. EHR can easily identified and they can be treated well.

PRELIMINARY PROJECT PROPOSAL

Online patient care is what the e-health care system, or virtual healthcare, refers to. Experts in the highly specialized e-Health system have extensive experience treating uncommon and challenging diseases. This web-based system was written in PHP and MySQL. Consists solely of a user-side component continuously. Here, users can schedule an appointment. You must first check in to this site in order to schedule an appointment. Please register here if users haven't done so previously. They can still find out where the closest hospitals are from here.

The front page of the E-Health system allows users to view the hospital's address. The user will eventually be able to see all the locations and hospital names on that page. E-Health various doctors, each with a specialty. Even the admin's contact list is visible to them.

By smart devices we mean: instruments, equipment or machines that have their own computational capacity. These electronic devices are connected to a network and interact autonomously with other devices and users. Moreover, smart devices also refer to devices that have properties of ubiquitous computing. Artificial intelligence is a core system that can perform a task using intelligence that mirrors (or is better than) human intelligence. Theoretically, any task that requires human intelligence to accomplish could instead be performed by artificial intelligence assuming the system has the adequate information and capabilities programmed. It accomplishes this by utilizing processes such as machine learning to scour sets of data and utilizing algorithms (instructions, or list of rules a computer should follow to solve a problem), to discover trends in data and provide insights for decision-making. Another Example: personal health record.

EHRs are the next step in the continued progress of healthcare that can strengthen the relationship between patients and clinicians. The data, and the timeliness and availability of it, will enable providers to make better decisions and provide better care.

For example, the EHR can improve patient care by:

- Reducing the incidence of medical error by improving the accuracy and clarity of medical records.
- Making the health information available, reducing duplication of tests, reducing delays in treatment, and patients well informed to take better decisions.
- Reducing medical error by improving the accuracy and clarity of medical records.

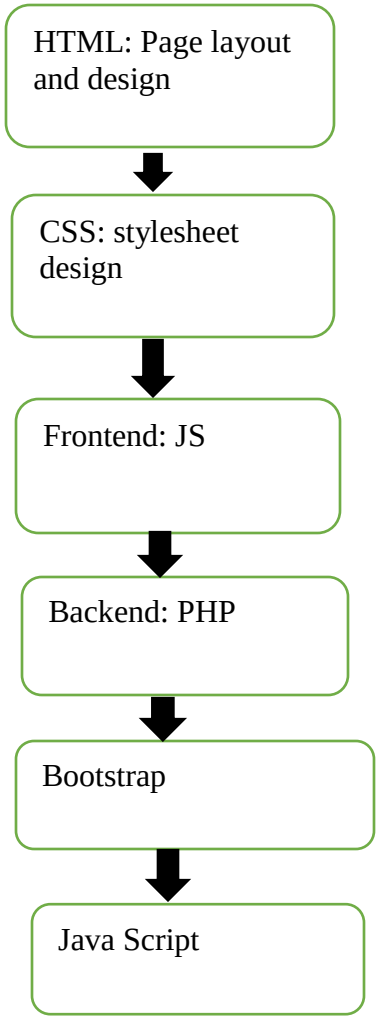
PROJECT DESIGN:

1. Firstly to create this website we need following languages and tools to run a program, therefore we use html for page layout and design for the program.

2. Secondly we will be using css for stylesheet design to give our program a proper background colours and themes.

3. Thirdly we use fronted JavaScript and backend PHP.

4. We also use bootstrap and finally we use JavaScript for the results. The is design is is given in the following page;



Operating Systems Supported for E-Health:

This project is compatible with the following operating systems:

• Windows:

• MAC:

• Linux:

DEVICES

1. Smart phone
2. Laptops
3. Computers
4. IPad

5. Tablets
6. Smart watches etc.

Clients:

The resources are allocated, that provides clinically oriented services to clients / patients; and prevention oriented, consultation-oriented, or training-oriented services to an identified clientele. Most often service units are revenue generating and are known as revenue centers. 2. Support Unit: an organizational unit that provides administrative, maintenance, and related support services to the organization and its service units. These units are usually nonrevenue producing, but are necessary for the efficient operation of the organization itself. Examples include accounting, personnel, or food service. The following are some of examples

1. Healthcare organizations
2. Common people and
3. Hospital staff.

How to run?

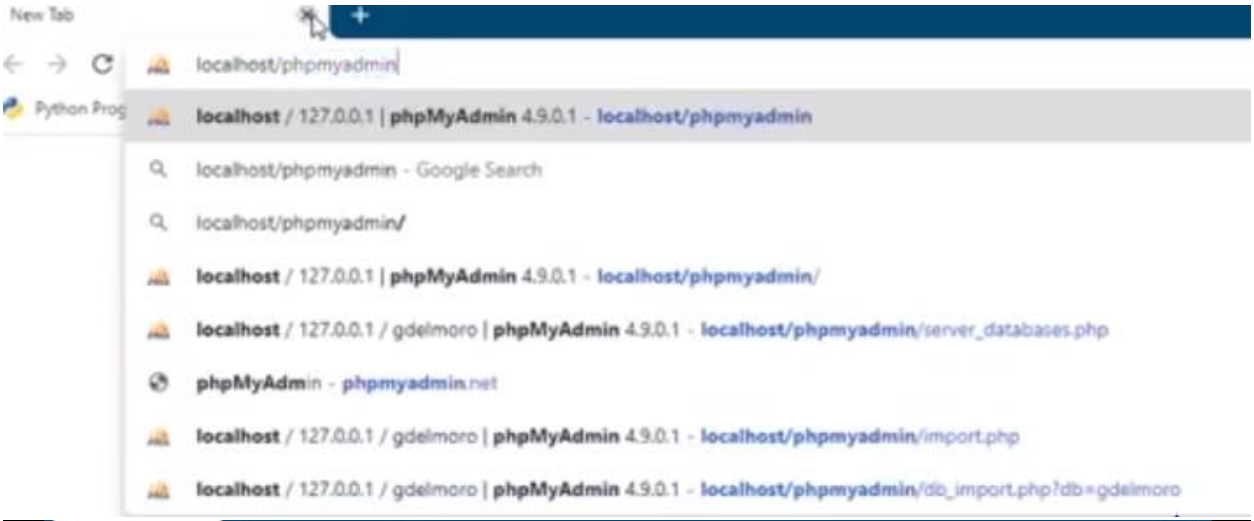
To run this project you must have installed a virtual server i.e XAMPP

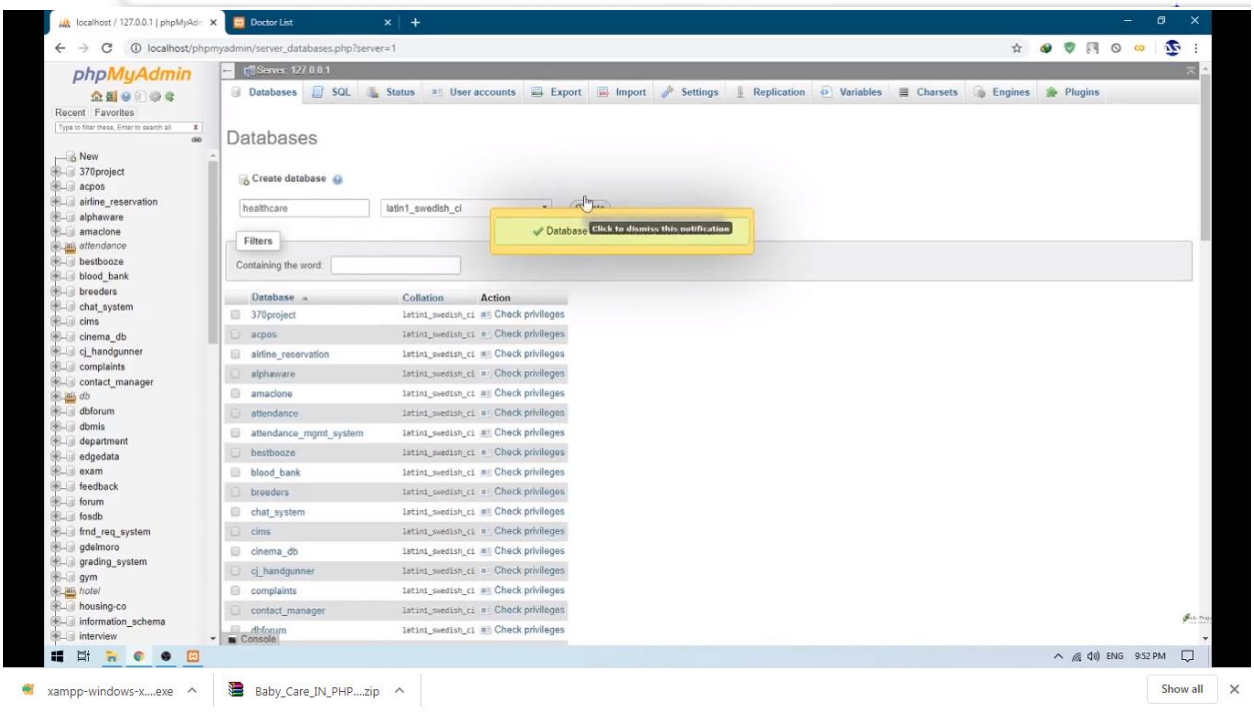
- *After Starting Apache and MySQL in XAMPP,*
- ***1st Step****:* Extract file
  2nd Step: Copy the main project folder
  3rd Step: Paste in xampp/htdocs/

- ***Now Connecting Database***
- ***4th Step:*** Open a browser and go to URL "http://localhost/phpmyadmin/"
  5th Step: Then, click on the databases tab
  6th Step: Create a database naming "db_healthcare" and then click on the import tab
  7th Step: Click on browse file and select "db_ healthcare.**sql**" file which is inside the "Database#version1.0" folder
  8th Step: Click on go.
- ***After Creating Database***,
- ***9th Step:*** Open a browser and go to URL "http://localhost/ healthcare -master/"

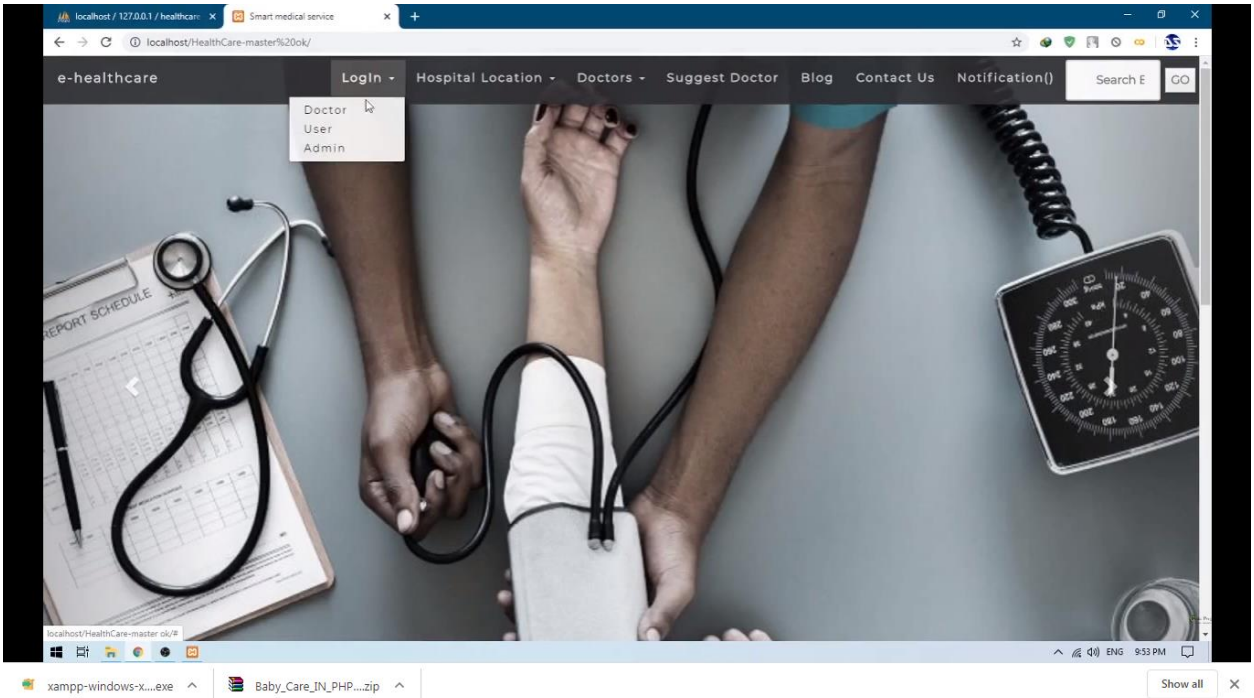
After processing all the steps next open a browser and type localhost/phpmyadmin. Then it takes to a login page where we need to get signed in and them phpmyadmin opens and there we get to create a database so we goanna select the health care file and select latin

_healthcaremaster and create then it takes to the main website page where we need to give credentials and login then it asks what are the symptoms and it will guide accordingly with doctor and it gives nearby doctors and their visiting hours so that we can schedule the meetings as shown below.

1. 

2. 

3.


localhost / 127.0.0.1 / healthcare
Smart medical service
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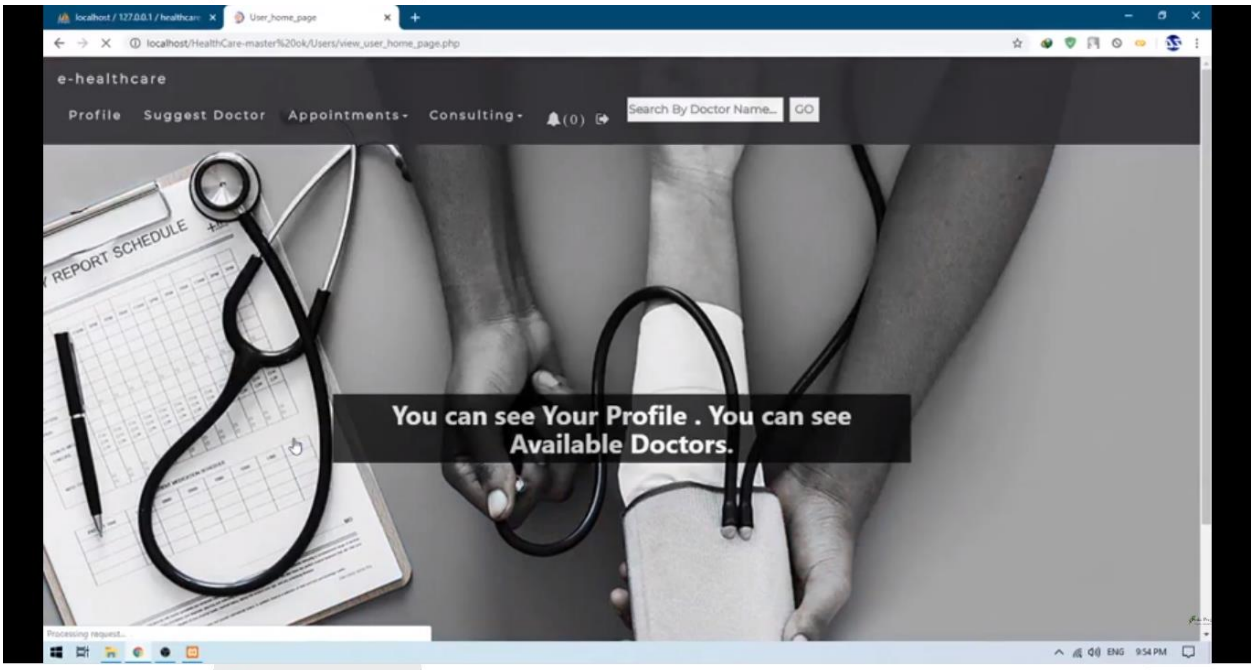
Show all

4.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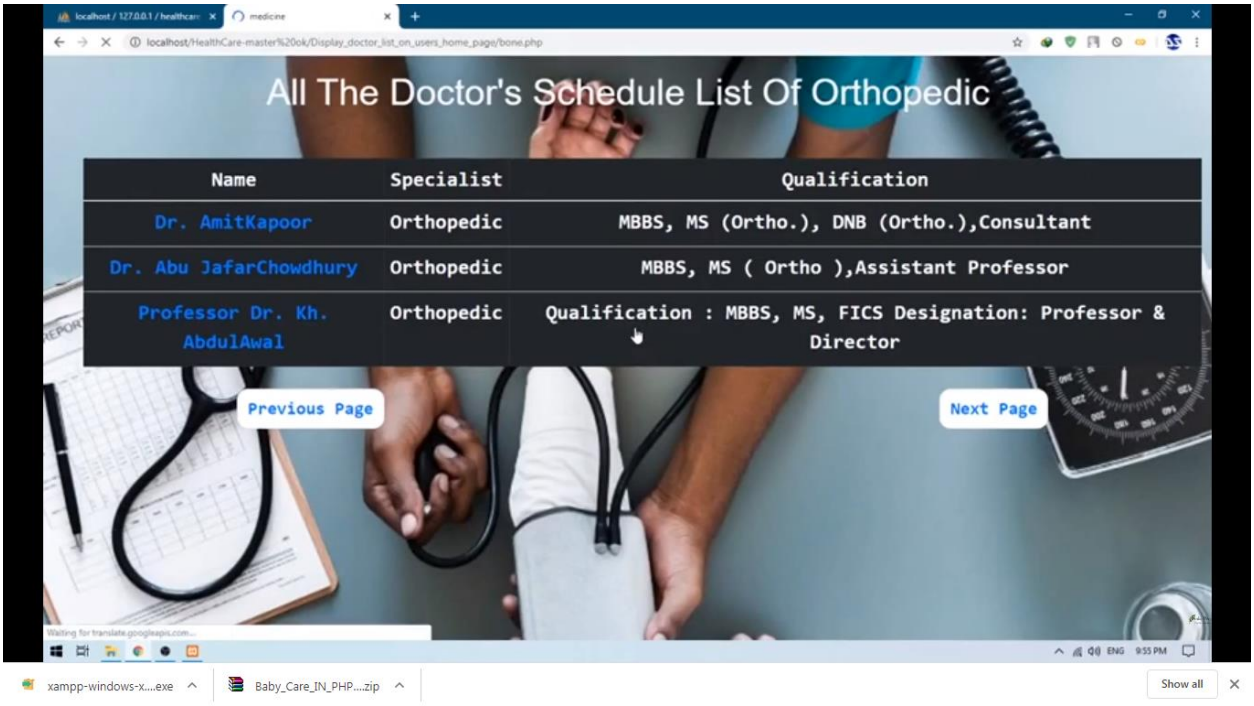
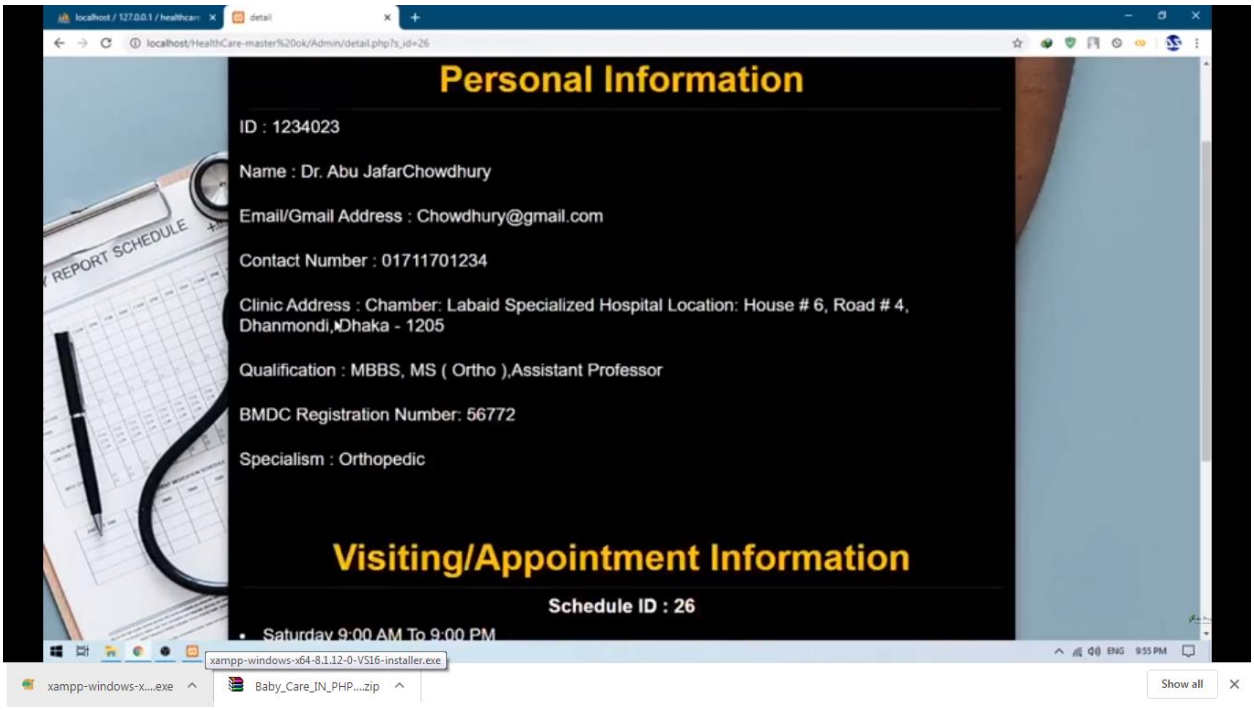
5. 

6. Final result:



Conclusion:

Connect the Patient Journey for Healthcare Providers as well as patient giving the proper and quick treatment.

The term "e-health care system" or "virtual healthcare" refers to online patient care. The highly specialized e-Health system's experts have a wealth of experience managing unusual and difficult diseases. PHP and MySQL were used to create this web-based system. Consists primarily and constantly of a user-side component. Users can make an appointment here. To make an appointment on this website, you must first log in. If users have not yet registered, kindly do so now. They can still use this location to find out where the nearest hospitals are. Users can view the hospital's address on the E-Health system's home page. All of the locations and hospital names will eventually be visible to the user on that page. Numerous specialists in e-health medicine.

ANNOTATED BIBLIOGRAPHY

Ikas Bansal, Emir Festić, Muhammad A. Mangi1, Nicholl A. Decicco, Ashley N. Reid, Elizabeth L. Gatch, James M. Naessens, Pablo Moreno-Franco, Suehyun Lee and Hun-Sung Kim, **Prospect of Artificial Intelligence Based on Electronic Medical Record.** https://www.ncbi.nlm.nih.gov/pmc/articles/PMC847396/

Abstract

With the advent of the big data era, the interest of the international community is focusing on increasing the utilization of medical big data. Many hospitals are attempting to increase the efficiency of their operations and patient management by adopting artificial intelligence (AI) technology that enables the use of electronic medical record (EMR) data. EMR includes information about a patient's health history, such as diagnoses, medicines, tests, allergies, immunizations, treatment plans, personalized medical care, and improvement of medical quality and safety. EMR data can also be used for AI-based new drug development. In particular, it is effective to develop AI that can predict the occurrence of specific diseases or provide individualized customized treatments by classifying the individualized characteristics of patients. In order to improve performance of artificial intelligence research using EMR data, standardization and refinement of data are essential. In addition, since EMR data deal with sensitive personal information of patients, it is also vital to protect the patient's privacy. There are already various supports for the use of EMR data in the Korean government, and researchers are encouraged to be proactive.

INTRODUCTION

In recent years, especially in the era of big data and artificial intelligence (AI), the demand for the use of medical big data is increasing, and the international community's attention is also focused on this endeavor. The electronic medical record (EMR), which stores all medical processes such as patient reception, examination, blood test, medication, surgery, and medical expenses, is evaluated as the most reliable medical data in the healthcare system. With the development of artificial intelligence (AI) the use of large-scale medical data and the necessity of individualized customized treatments are highlighted. Thus, further use of AI in collating EMR data is critical. For this reason, in the United States, not only has the use of EMR increased, but efforts are on to improve the quality of EMR. Through Health Information Technology for

Economic and Clinical Health (HITECH), an investment plan to improve the poor informatization situation of US medical institutions was specified, and for this purpose, a certification system was created to introduce an accredited EMR. In Korea, in the era of big data and AI, many researchers are interested in structuring and standardizing data in order to properly use medical data clinically, and are trying to develop guidelines or certification standards for the same.

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PROJECT PALN

- I intend to complete the proposed project in a 15-week timeframe.
- week 1 – 2
- Project requirements and specifications to be finalized.
- week 3 – 6
- Collection of data.
- week 7 – 9
- Organization of data and application of an software tools to determine the significance and uses of online -EHR.
- Week 10 – 12
- Integration evaluation and further refinement of the project work. Draft the final report. Prepare for the oral presentation. Documentation of the various tasks to produce the written deliverables will be done on regular basis throughout the course of the project.

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