FACULTY OF ENGINEERING AND APPLIED SCIENCE

Software Project Management Lab

Lab Report 1

Group 07

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Improving Healthcare Access Through Smart Health Prediction Systems

Introduction:

Accessible healthcare is essential for the wellbeing and health of the society. Accessing healthcare can be a challenge for many individuals due to various reasons, which can sometimes lead to fatal consequences. To address this issue, our team proposes the development of a smart health prediction system that empowers individuals to take control of their health while also ensuring seamless connectivity to nearby healthcare providers when necessary.

Objectives:

The ultimate objective of this project is to enhance the wellbeing/health of the public and allow technology to be a contributor in the healthcare system. However, major guidelines that this project will adhere to are listed below:

- Ensure that the patient is aware of their specific medical conditions and results from medical examinations (access to their own specific data).
- Comply with medical standards and regulations to maintain healthcare standards in technology and provide patients with required data.
- Provide patients with instant access to healthcare advice and guidance from medical practitioners through an online consultation service.
- Allow patients to access the system at any point in time (24/7). To prevent any critical situation from causing a traumatic event and ensuring expeditious medical attention.
- Integrate predictive analytics to identify and make the patient aware of potential health risks and expected patient outcomes. This will increase awareness in the patients and allow them to take preventive measures.

Target Investors:

Potential investors for this project include doctors, medical practitioners, government agencies, and older high-ranking employees. The convenience of on-demand healthcare services, especially for busy individuals, makes it an attractive investment opportunity for professionals in the medical field and older demographics.

Investment Considerations:

Healthcare projects typically require substantial investment due to the critical nature of the industry. Given the importance of accuracy and reliability in healthcare, our system will prioritize error-free operation and data security. Securing funds for development, gathering healthcare information, and engaging medical experts are essential steps in ensuring project success.

Success Metrics:

- Success will be measured by user reviews, user growth, and feedback from medical professionals. Positive reviews and increasing user numbers indicate the system's effectiveness and acceptance.

- The data of each individual will be stored in a database and that will maintain the requirement for allowing patients to access their data accurately.

- The system will include a functional database that stores details of pre-implementation of predictive analysis measures and post implementation of predictive analysis measures and will track the increase or decrease in misdiagnoses using data analytics (this will measure the effectiveness of the predictive analysis system).

- Conducting security audits and testing to ensure that patient data cannot be accessed by external sources, maintaining the privacy and security of the patients.

- Implementing verification processes in the system to ensure that patient data can only be accessed by the patient or a medical practitioner.

System Infrastructure

a) Massive database for tracking patient data, interactions and outcomes.
b) A database management system will be created using mySQL for the storage and retrieval of data.
c) Secure user profiles with firewalls and routers to ensure network security.
d) Software for implementing data analytics, in order to practice predictive data analysis.
e) Computers for healthcare professionals to manage the system.
f) Mobile app development technology to allow patients to access medical records on-the-go.

By harnessing the power of technology and data, our smart health prediction system aims to revolutionize healthcare access, ultimately improving outcomes and saving lives.