

Hospital Recommender System Using Android

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Abstract - Surveys are used by hospitals to evaluate patient satisfaction and to improve general hospital operations. Collected satisfaction data is usually represented to the hospital administration by using statistical charts and graphs. Although such visualization is helpful, typically no deeper data analysis is performed to identify important factors which contribute to patient satisfaction. This work presents an unsupervised data-driven methodology for analyzing patient satisfaction survey data. The goal of the proposed exploratory data analysis is to identify patient communities with similar satisfaction levels and the major factors, which contribute to their satisfaction. This type of data analysis will help hospitals to pinpoint the prevalence of certain satisfaction factors in specific patient communities or clusters of individuals and to implement more proactive measures to improve patient experience and care.

Key Words: healthcare, Android, Java, frontend, 000Webhost, database, backend

1. INTRODUCTION

Patient satisfaction has been proven to be one of the most valid indicators of the quality of care. Analysis of patient satisfaction data is in demand by many health-care providers. Most health-care providers, from doctor's offices to clinics and hospitals, collect patient satisfaction surveys to evaluate their various services and patient experience. For improving patient satisfaction, issues of health care provided at the hospital level and the factors that originate those issues from patients' point of view should be discovered. Therefore, survey data should be either manually analyzed by examining each possible pattern in the data set using conventional methods or an unsupervised methodology is needed to do the analysis with least amount of human interaction. Such methodology should get the satisfaction survey data, find patterns that are repeated among patients' demographics and their satisfaction level in different fields, validate the patterns and compile them into a set of recommendations to help hospitals improve satisfaction within various patient communities.

2. Literature Survey

HCAHPS [3] is a standard survey instrument used by many hospitals to evaluate patients' experience. This data is provided by the HCAHPS database, which is funded by U.S. agency for health care research. The centers for Medicaid and Medicare services use the scores from HCAHPS to reimburse hospitals for patient care. Providing a high quality care is directly related to a hospital's revenue and many hospitals are looking for ways to improve patient experience and achieve a higher HCAHPS score. There have been several studies on the HCAHPS dataset. Stratford [4] defined a number of objectives to extract useful knowledge from the HCAHPS survey data and studied the effect of such knowledge on hospital care improvement. Sheetz et al. [5] investigated the relationship between postoperative morbidity and mortality and patients' perspectives of care in surgical patients. In their article, the overall satisfaction score is used along with Michigan Surgical Quality Collaborative clinical registry as a measure of patients' perspective of care. Quite a few studies have explored specific relationships between a single satisfaction question and one or more of patients' demographic information. Goldstein et al. [6] conducted an analysis of racial/ethnicity in patients' perceptions of inpatient care. Using regression, they concluded that non-Hispanic Whites on average tend to go to hospitals that deliver better patient experiences to all patients as compared to the hospitals that are typically used by African American, Hispanic, Asian/Pacific Islander, or multiracial patients

3. Block Diagram



Fig -1: Block Diagram

4. Flow Diagram

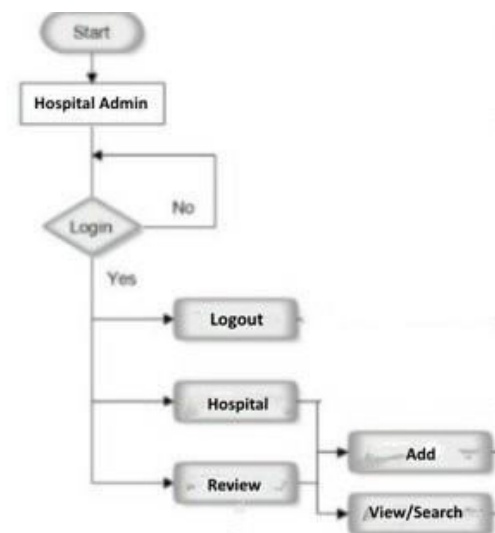


Fig -1: Flow Diagram

5. Platform Used

- Android Studio- Android Studio is the official integrated development environment for Google's Android operating system, built on IntelliJ IDEA software and designed specifically for Android development.
- MySQL- MySQL is an open-source relational database management system

6. Future Scope

For future work, our review suggests to extend the existing solutions by:

- Adding online appointment booking system
- Connecting doctors so that patients can consult them online
- Adding recommendations for the dosage of medicines

7. Conclusion

On a daily basis users find it difficult to search hospitals, this application helps users to spot hospitals. Having a hospital recommendation system helps users to find hospitals according to their need. The proposed hospital recommendation system is inspired by the increasing disease around the world. For this we've used Java for the implementation & design of the project. To implement the recommendation part, we've use the MySQL database to get information of hospitals and doctors added by different users and reviews of the hospitals.

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