**Med-Recommender System for Predictive Analysis of Hospitals and Doctors**

**Published year** : Second International Conference on Computational Intelligence in Data Science (ICCIDS-2019)

**Authors** : S. Swarnalatha , I. Kesavarthini , S. Poornima , N. Sripriya

**Link to the paper** : <https://sci-hub.se/10.1109/ICCIDS.2019.8862121>

**Summary** :

Med–recommender system aims to provide accurate analysis of hospitals by taking into account the reviews by thousands of patients, which were written by the patients themselves in various online forums. Our recommendation system performs sentiment analysis on the reviews of various patients using NLP techniques to classify them as positive and negative reviews. It weighs the ranking of hospitals on three different parameters namely polarity, subjectivity and intensity. The proposed system also helps the users to understand the quality of a certain hospital by providing star ratings for the hospital when the user needs.

**Number of online reviews** : 300

**Accuracy** : 90%

**Objectives** :

1. Med–recommender system is aimed to gathers the comments and reviews written by patients from numerous discussion forums and analyzes the sentiment of those comments and gives an informed and accurate result to the user.
2. Med-Recommender system acts as a bridge between the users and the healthcare providers.
3. The patients can use it to find a hospital which can best help them during their period of illness
4. The healthcare providers can harness this product as the definitive platform that helps them build their presence, grow establishments and engage patients more deeply than before.
5. Provide the user with the ratings of a particular hospital based on reviews written about it
6. Provide the most important portion of medical help at very low cost and minimal effort even to the layman

**Flow Chart of the proposed algorithm** :

Diagram

Description automatically generated

**Sentiment Scores** :

Text

Description automatically generated

**Implementation Details** :

* TextBlob is used NLP tool provided by Python.
* Tkinter – GUI ( frontend )
* **Interface** : Text

  Description automatically generated

**Evaluation** :

1. Accuracy = (TP + TN) / Number of occurrences
2. Precision = TP/(TP+FP)
3. Recall = TP/(TP+FN)
4. F-Score = 2TP/(2TP+FP+FN)
5. False Positive Rate = FP/(FP+TN)

Table

Description automatically generated