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A Novel Approach to Medical Tourism Support System

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Abstract: A new model with decision support capabilities to assist medical tourism customers is to be developed. The analysis of popularity and quality of medical tourist applications are conducted. The information sources used to arrange medical tourism trips are given in the paper. The formation of the user's medical recommendations is based on the information about symptoms of the user, processing of this information, creation / search of the user medical card, search for the coincidence of the user's symptoms with the signs of illness, finding the best treatment option for the user. The system to support medical tourism consists of seven interdependence components: user interface, user profile analysis, definition of the user disease, selection of hospitals and doctors, communication with doctors and tour organization. The system to support medical tourism which provides the user with the all necessary information about the travel organization and medical support is described. Tasks that require further research are defined.

Keywords: Decision support systems, diseases, health care, medical information systems, travel industry, user interfaces

I. INTRODUCTION

Medical tourism is growing rapidly and forming a profitable industry which everyone is wanting a share. However, the best hospitals are state owned and they are not competent to do marketing and promotion. So the international clinics affiliated these hospitals face some demand deficiency. If some new hospitals are established to develop the international medical treatment, it is difficult for them to attract patient abroad because lack of reputation.

A new model with decision support capabilities to assist medical tourism customers is developed. The analysis of popularity and quality of medical tourist applications are conducted. The information sources used to arrange medical tourism trips are given in the paper. The formation of the user's medical recommendations is based on the information about symptoms of the user, processing of this information, creation / search of the user medical card, search for the coincidence of the user's symptoms with the signs of illness, finding the best treatment option for the user.

II. AIMS AND OBJECTIVE

- A. Aim is to build a system to assist in medical tourism of international patients anywhere around the world.
- B. To Provide best medical treatment to each patient from around the world with most affordable cost.

III. LITERATURE SURVEY

YANG Yu-hong(School of Economics and Management, University of Tongji, China): An Available Way for Developing Medical Tourism in Shanghai: A Theoretic Exploration Shanghai government plans to develop medical tourism and takes it as a part of becoming the center of modern service industry.

Valeriia Savchuk (Lviv Polytechnic National University, Lviv, Ukraine): Medical Tourism Information Support System - The system to support medical tourism which provides the user with the all-necessary information about the travel organization and medical support is described.

Ujaya Muangna Software Systems Engineering, KMUTNB Bangkok, Thailand: Social network for Thailand medical tourism The proposed application was designed to improve the quality of information by integrating three types of data: social networks, tourism and medical data.

S. A. Shinde Vidya Pratishthan's College of Engineering, Baramati, Pune, Maharashtra, India : Patient-centric medical information system based on web services for tuberculosis control in India. The prototype developed here provides a central place for the patients over the internet to avail their medical information from these disparate healthcare providers using web services.

IV. DESIGN AND IMPLEMENTATION

A. Proposed System

Medical tourism consists of several services: medical service, travel service, financial, and legal. In this paper we develop a design for the service management system that has an impact on customers and support their decision making process. This service system supports two stages in the entire process; namely, the “back stage” and the “front stage.” In the back stage, government bodies facilitate the gathering and the assessment of information from hospitals and travel organizations that can be used in the service selection.

The main services of the sites can be separated into five main functions:

- 1) As a gateway to medical and surgical information,
- 2) Connectivity to related health services,
- 3) The assessment and/or promotion of services,
- 4) Commerciality and
- 5) Opportunity for communication

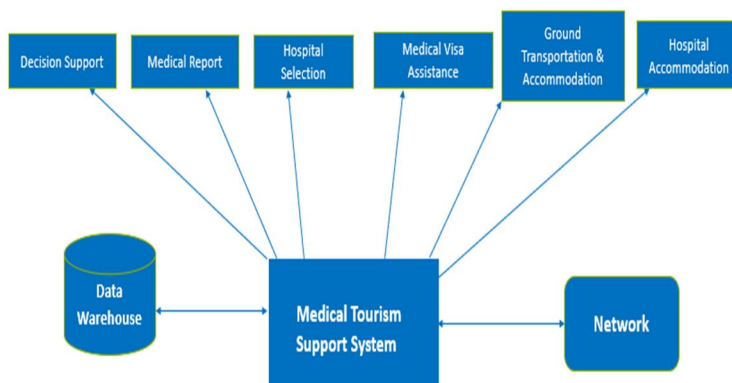


Fig. 1 System flow Diagram

B. Modules

- 1) *Information Selection:* A coaching set is employed to coach the machine learning method to know the potential relationship between the informative variables and target variable.
- 2) *Information Cleaning:* information improvement suggests that filtering and modifying your information specified it's easier to explore, understand, and model. Filtering out the elements you do not wish or would like in order that you do not ought to consider or method them.
- 3) *Information Imputation:* Machine learning algorithms need numeric input values, and a worth to be gift for every row and column in a very dataset. As such, it's common to spot missing prices in a very dataset and replace them with a numeric value.
- 4) *Information Analysis:* A way of knowledge analysis that automates analytical model building. it's a branch of computer science supported the concept that systems will learn from information, determine patterns and create selections with least human intervention.
- 5) *Information Image:* Information visualization is that the illustration of {information} or information in a very graph, chart, or alternative visual format. Machine learning makes it easier to conduct analyses like prophetic analysis, which might then function useful visualizations to gift.
- 6) *Coaching:* Training information is that the information you employ to coach associate degree algorithmic rule or machine learning model to predict the result you style your model to predict.
- 7) *Testing:* A take a look at dataset may be a dataset that's freelance of the coaching dataset, however that follows identical likelihood distribution because the coaching dataset.
- 8) *Algorithmic Rule Selection:* Machine learning algorithms ar the engines of machine learning, which means it's the algorithms that flip an information set into a model.

C. Planned Methodology

- 1) *k-means*: *k-means* creates *k* groups from a set of objects so that the members of a group are more similar. It's a popular cluster analysis technique for exploring a dataset.
- 2) *Apriori*: The *Apriori* algorithm learns association rules and is applied to a database containing a large number of transactions.
- 3) *Page Rank*: *PageRank* is a link analysis algorithm designed to determine the relative importance of some object linked within a network of objects.
- 4) *kNN*: *kNN*, or *k-Nearest Neighbors*, stores all the available data and classifies a new data point based on the similarity.

V. CONCLUSION

In this project, I propose a A new model with decision support capabilities to assist medical tourism customers is developed. The analysis of popularity and quality of medical tourist applications are conducted. The information sources used to arrange medical tourism trips are given in the paper. The formation of the user's medical recommendations is based on the information about symptoms of the user, processing of this information, creation / search of the user medical card, search for the coincidence of the user's symptoms with the signs of illness, finding the best treatment option for the user.

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