PERSONAL TRIP ADVISOR SYSTEM

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ABSTARCT :

Tourism transportation research has become increasingly prominent due to the rapid expansion of Internet technology and the overwhelming availability of information. This abundance poses challenges in delivering tailored services that meet diverse user preferences. Consequently, personalized tourism transportation has emerged as a predominant trend. This paper proposes a mathematical model for personalized travel planning by integrating mainstream tourism service analysis with multi-source traffic data. The proposed approach introduces a two-stage spatiotemporal network solution algorithm. In the initial stage, utilizing a specified set of travel attractions, it employs a shortest path algorithm to determine an approximate optimal route that aligns with traveler preferences and supports multiple transportation modes. The second stage utilizes the spatiotemporal network to facilitate daily travel planning across multiple attractions. This algorithm effectively addresses path planning challenges and simplifies route planning with time constraints, offering valuable insights for future recommendations in personalized travel planning.

Index-Terms: Tourism transportation, personalized travel planning, spatiotemporal networks, shortest path algorithm, multi-source traffic data.

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I.INTRODUCTION

Tourism transportation is a central issue in various studies at present [1], and it involves many aspects such as tourism, multiple transportation modes, and travel decisions. Currently, mainstream tourism service providers have provided users with a large number of tourism transportation services, but it is indeed impossible to intelligently plan travel itineraries based on users' own needs. Custom travel services still need to be done manually. It takes a lot of manpower and time, so the problem of trip planning is a topic that travelers pay attention to, but it is a theoretical problem. Research shows that personalized travel recommendation functions can be divided into three parts: (1) recommending a certain aspect of the travel itinerary, including living, eating, traveling, entertainment, shopping; (2) recommending travel routes; (3) recommend complete tourist itinerary [2]. Personalized tourism recommendation technology is the key technology to solve the current information redundancy in the tourism industry. When a traveler is planning a travel itinerary, they will find related travel information. However, the large amount of data makes it difficult for travelers to quickly and efficiently obtain valuable information from complex data.

II.LITERATURE SURVEY

In 2017, Haqqani M., Li X., Yu X. proposed a preference estimation method that integrated an implicit relevance feedback method into the journey planner. They utilized the user's travel history data to estimate the corresponding preference model.

In 2018, Li Xiaoxu, Yu Yaxin, and Zhang Wenchao aimed to efficiently handle large-scale social network trajectory data. They employed the MapReduce programming model with optimized clustering to mine coterie group patterns.

In 2020, Liu Zelin, Cao Jian, Tan Yudong, and Xiao Quanwu introduced an effective method for air travel planning. Their approach involved retrieving multiple air travel plans using APIs provided by airlines. Concurrently, numerous scholars explored spacetime networks in various research fields.

In 2017, Chen Jingwei and Liu Ming proposed a time-space network model for the operational system of automated vehicles. This paper detailed the movements of passengers and automated vehicles within road networks. The transformation of the original road network into a static space-time network reduced the model's complexity.

In 2018, Sai Qiuyue et al. designed a discrete space-time network construction algorithm for abnormal flights. They also proposed a feasible path generation algorithm based on the constructed discrete-time network.

In 2019, Zhang Zheming et al. developed a network integrated with crew rules to manage network size and simplify mathematical models. They demonstrated the method's effectiveness in solving high-speed railway passenger traffic planning and addressing large-scale mixed-time problems.

Cao Yang et al. expanded the understanding of itinerary planning from a spatial to a tourist activity perspective. They organized multidimensional attributes such as time, space, and topic involved in travel, and proposed the concept of a travel's spatiotemporal chain through the spatiotemporal coupling relationship and reconstruction mode of tourism nodes.

III.EXISTING SYSTEM :

Tourism transportation is a central issue in various studies at present [1], and it involves many aspects such as tourism, multiple transportation modes, and travel decisions. Currently, mainstream tourism service providers have provided users with a large number of tourism transportation services, but it is indeed impossible to intelligently plan travel itineraries based on users' own needs. Custom travel services still need to be done manually. It takes a lot of manpower and time, so the problem of trip planning is a topic that travelers pay attention to, but it is a theoretical problem.

IV.PROPOSED SYSTEM

many scholars use space-time networks to conduct in-depth research in various fields. In 2017, Chen Jingwei, Liu Ming. proposed a time-space network model of the operational system of automated-vehicles. By using the technique of the time-space network, this paper described in detail the movements of the passengers and the automatedvehicles in the road network. The transformation of the original road network into a static space-time network reduced the complexity of the new model [7]; In 2018, Sai Qiuyue et al. designed a discrete space-time network construction algorithm for abnormal flights, and proposed a feasible path generation algorithm based on the constructed discrete-time network[8] ; In 2019, Zhang Zheming et al. built a spatiotemporal state network integrated with the crew rules to control the network size and simplify the complexity of mathematical models. It is proved that this method can not only effectively solve the problem of high-speed railway passenger traffic planning, but also has a certain effect when solving large-scale mixed time problems [9]; Cao Yang et al. extended the understanding of the itinerary planning problem from a spatial perspective to a tourist activity perspective. From the spatiotemporal coupling relationship and reconstruction mode of tourism nodes, the multidimensional attributes such as time, space, and topic involved in the travel were organically organized, and then the travel's spatiotemporal chain was proposed.

The conceptual model and the method of space-time convergence of the stroke elements.

V.SYSTEM ARCHITECTURE

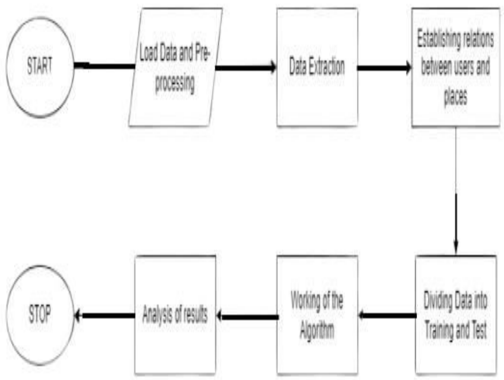

Figure.1 System Architecture

VI.RESULTS

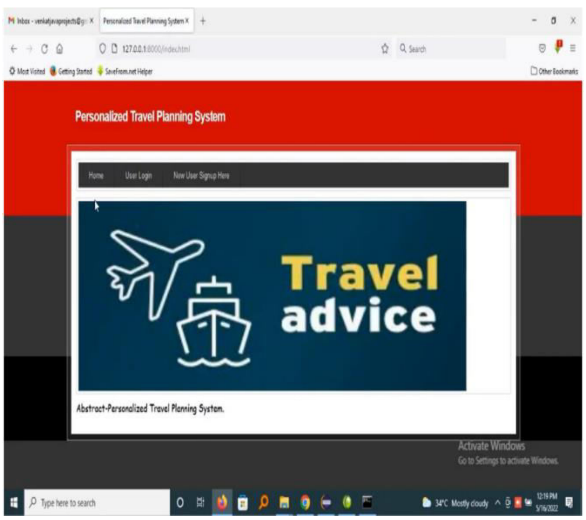

Figure.2 Main screen

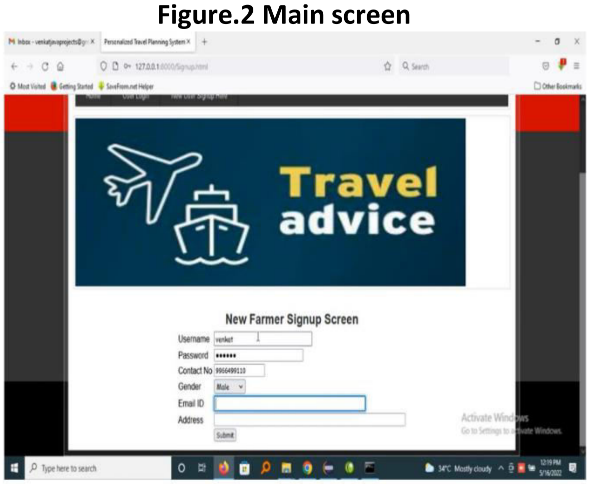

Figure.3 Signing screen

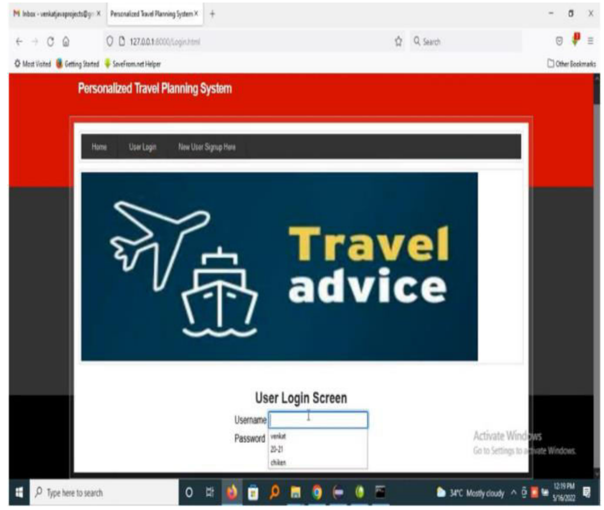

Figure.4 User login screen

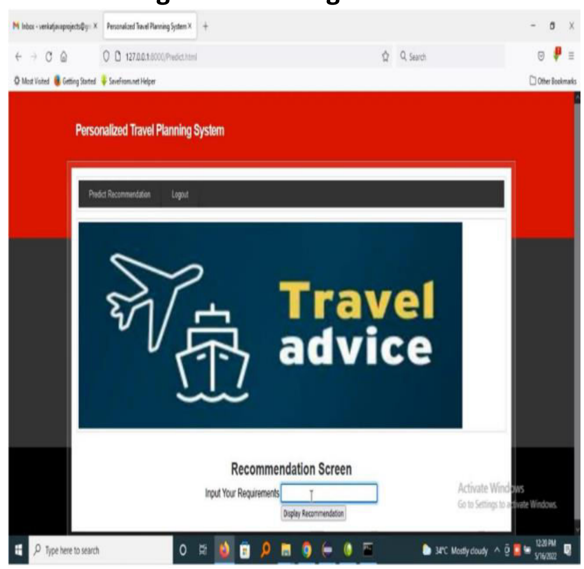

Figure.5 Recommendation screen

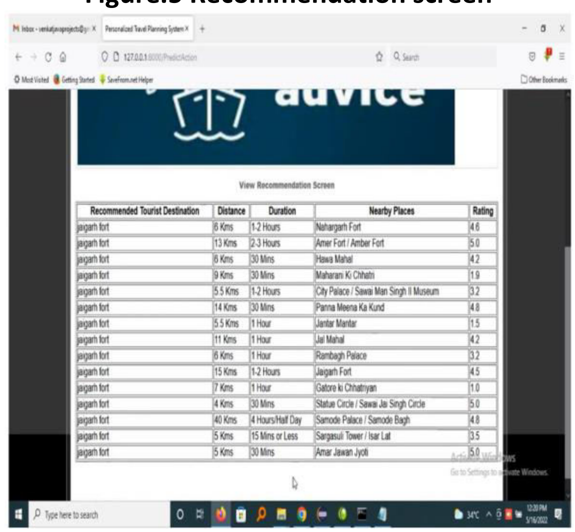

Figure.6

VII.CONCLUSION

A decision tree based tourist recommendation system has been presented in attempt of solving the current challenge of the destination TRS. The data set has been decomposed into two sub data sets using relevant tourism domain knowledge. This was done to increase classification accuracy rate and to reduce the complexity of the decision tree. The optimal decision trees from NMIFS with the highest accuracy rate and simplicity (i.e. less number of leaf and tree size) have been constructed for destination choice. The decision rules from decision trees were extracted. It can be seen that NMIFS is the optimum method because it uses fewer number of feature than MRMR for both of the data sets. Finally, the experimental results confirm applicable of the proposed a TRS. The proposed TRS satisfies the tourists' requirements who plan to visit or during their visit the city of Chiang Mai.

VIII.REFERANCES

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