Marathwada Shikshan Prasarak Mandal’s

**Deogiri Institute of Engineering and Management Studies,**

**Aurangabad**

**Seminar Report**

**On**

**Intelligent Tourist Guide**

Submitted By

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Department of Computer Science and Engineering

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**Aurangabad**

(2019- 2020)

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**In partial fulfillment of**

**Bachelor of Technology**

**(Computer Science & Engineering)**

Guided By

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**Aurangabad**

(2019- 2020)

**CERTIFICATE**

This is to certify that, the Research entitled “**Intelligent Tourist Guide**” submitted by **Ms. Dipti.D.Dhakne and Ms. Akanksha.R.Wankhade** is a bonafide work completed under my supervision and guidance in partial fulfillment for award of Bachelor of Technology (Computer Science and Engineering) Degree of Dr. Babasaheb Ambedkar Technological University, Lonere.

Place: Aurangabad

Date:16th October 2019

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**ABSTRACT**

There has been a huge development in information technology recently. In addition, GIS has been commonly used in different fields such as tourism activities enabling people from different countries and cultures to interact with each other. A network is a set of linear features that are interconnected in GIS. Common examples of networks include highways, railways, city streets, rivers, transportation routes (e.g., transit, school buses, garbage collection, and mail delivery), and utility distribution systems (e.g., electricity, telephone, water supply, and sewage). Collectively, these networks form the infrastructure of modern society. Tourists visiting a new city are provided with city map pamphlets that need to be viewed by the tourists to find the fine printed locations to visit. Well it doesn’t consist of entire details of those locations or how to reach the location as well as other emergency amenities like hospitals, institutes, bus stops etc. The Google and other navigation systems are internet based systems that do not work outside internet connections. So here we propose an Intelligent Tourist system that will help tourists and people shifting to new cities to locate and find amenities in that particular city. The developing tourist industry proposes higher and higher demands to the intelligent tourist guide system, which can take place of the traditional artificial guide service. Functions of intelligent automatic interpretation, real time navigation, intelligent route planning and surrounding service reminder are included in it. With rapid development of electronic information technology and computer technology as the support, this thesis combines with the shortest path algorithm and related knowledge of graph theory to design algorithm and processing scheme. Moreover, this thesis also introduces research design of intelligent tourist system as well. Thus, the function of APP on the android platform is realized. This paper proposes a model for implementation on intelligent tourist information system. It uses the concept of knowledgebase. The model will be based on the study of human behavior as tourism guide. It builds the relationships between the knowledge based system and the guide, so that it provides service for any visitor which meets their needs and the objective of gaining information of places. There are different modules, different path finding systems and shortest path finding algorithms of artificial intelligence in this thesis. The proposed system should be designed in such a way that it runs on most of devices i.e. palmtop and mobiles. Thus it can be useful while visiting new places. This system would find a route using user criteria. The Shortest path finding algorithm should work efficiently and optimally in most of the cases.

**CONTENTS**

Introduction 6

Literature Survey 8

* Objective
* Existing System
* Recommender System
* Architecture

Modules and description 10

Advantages 12

Disadvantages 12

Conclusion 13

Acknowledgement 14

**INTRODUCTION**

With the development of national economy, formation of a new life concept and the perfection of vacation system, tourism has become more and more people’s choice during the holidays. Its market is broad and potential. At present, the main way for guide service is the artificial guide service, which have many shortcomings. Such as the insufficient number of tour operators, the high cost of artificial guide service, the quality of tour guides’ explaining and noise pollution, which cause tourists to be dissatisfied with the current traditional tourist guide service quality. Previous electronic tourist guide system mainly designed some equipment with electronic information technology. The main content is information related to historical and cultural background, which is in multimedia form. Its function is realized by operation of tourists or staff. This system is usually designed for one specific scenic spot. It cost much for the scenic. Moreover, it is inconvenient for tourists to operate, and services it supply are limited. With developing tourism and refining demands from tourists, previous systems can not meet the current situation. As the tourist is the key of guide services, we must carry out theoretical study and practical design on intelligent tourist guide systems base on the tourists’ demands. Related Studies on Intelligent Tourist Guide System Research on intelligent tourist guide system first started in European and American countries in 1990s. Because of close relationship among its development, electronic technology, and market demand, related research on this system soon become the research focus of scholars and enterprises, with scientific and technological progress and tourism industry development. Abroad Studies abroad have already been superior to studies at home on theoretical studies and technical practice on this study. On one hand, their tourism and related service industry began earlier than China, which lead to their advanced research. On the other hand, technology in developed countries surpassed China, which is the basis of research. At present, most scenic spots have adopted electronic guides in developed countries, especially indoor exhibition halls such as museum. Electronic guide system was designed and put in use by Abowd, Atkeson and their partners in 1996. In 2011, H. H. Owaied linked artificial intelligence International Conference on Education, Management and Computing Technology (ICEMCT 2015) © 2015. The authors - Published by Atlantis Press 1200 to intelligent tourist guide system and came up with a research model which is composed of the user interface, knowledge base, dynamic link library, inference engine and application apparatus. At Home As to the current tourism industry situation in China, the potential market of electronic intelligent guide is very broad. And some related researches have been carried out, which include theoretical and practical research issues. On theoretical aspects, Guo Junfeng from Qingdao University completed his master’s thesis by a comprehensive research and analysis on self-help electronic tourist guide system and summarized the respective characteristics and differences of electronic guide and traditional artificial guide, which supports the following study of intelligent tourist guide system. On practical aspects, China began to try to replace traditional manual guide service with electronic tour guide service in twentieth Century, such as Lijiang River, Shanxi Yellow Emperor Mausoleum, Tianjin museum. But the main form used is digital buttoned machine. Its form and function is original and sole without intelligence.Then in Beijing, such as Tiantan Park, and the Summer Palace began to appear according to the wireless signal induction can automatically electronic guide system interpretation service. Questions Based on the current status and development of intelligent navigation and electronic guide , this thesis summaries up the following four problems need to be solved on its study. • Question 1: Previous electronic guide system can only provide limited functions, such as historical and humanistic introduction of scenic spot in the form of text or voice for tourists, without location information, recommended route, surrounding guide services, which are basic functions. • Question 2: Most scenic held electronic guide devices are button or touch screen type facilities set up in fixed location. Visitors can only access to these in the specific place. Some scenic spots may provide mobile hand-held devices, which is inconvenient for tourists to take and influences their travailing experienced. • Question 3: In practical usage, electronic guide system need to define and divide range of attractions. Most of the current schemes are WiFi signals or signal source point layouts of a RFID in some spots, which set the effective signal coverage to fit the size of the scenic spots. But in fact The region of one attraction rarely is round or other regular shape, some attractions region even presents crescent or irregular, narrow rectangular.

**LITERATURE SURVEY**

**OBJECTIVES**

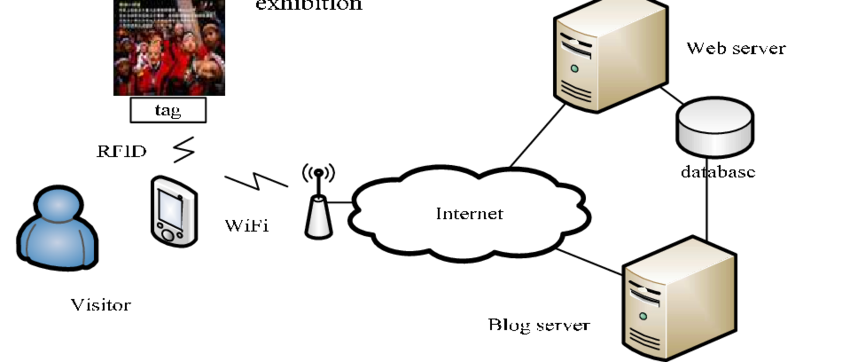
The main objective of the research paper is to design a knowledge base system which will be built on the study of human’s behavior and adopting the human intelligence in the machine. To help in designing the efficient, fast path searching algorithms with optimization. To provide the structured database, each place with its short description, timings, ratings etc with GPS and GPRS. The geographical database of the places should also be built. To find shortest path between two points (location) in map i.e. navigation systems.

**EXISTING SYSTEM**

In the existing system, people who want to travel searches lots of tourism websites. They need to know the information about the place of interest. They visit certain travel websites or hire a tourist guide which may consume a lot of time. The existing system gives the details like phone number, address, ratings. If a person wants to decide which place he/she wants to visit first, they need to know the information about the place, which the existing system is unable to provide.

**RECOMMENDER SYSTEM**

A recommender system is a subclass of information filtering system that seeks to predict the preference that a user would give to an item. It is used in variety of areas including the research articles. It typically produces a list of results in one of the two ways- collaborative and context based filtering.



**ARCHITECTURE**

The term artificial intelligence means to embody the human intelligence into machine. The machine should have the capabilities that a human possess. The capabilities such as smart, solving unstructured and complex problems like human does. The machine should understand the language spoken by humans, able to analyze data and information. For example when some expert delivers lecture to student, student learns from it, does hard work and performs activities after learning it. In the same manner machine is made to embody the expert knowledge into some computer program for carrying out some task. The keyboard will be replaced by speech through natural language processing. Human can solve algorithmic and non algorithmic problems. There must be some methods to solve non algorithmic problems, in the form that machine can solve. This capability is the most important thing in artificial intelligence and we are concentrating on them. It includes various functional modules such as user interface, knowledge base, dynamic database, Inference engine

**MODULES AND THEIR DESCRIPTION**

1. User Registration/Login
   1. Questionnaire Tab
   2. Manual Tab
2. Admin Login
   1. Enter Places
   2. Edit/Update Questionnaire

* **User Section:**

1. A login page will appear initially and the user has to login in order to continue.
2. If the user is new he/she will have to fill the registration form (username, password, email, first name, last name, etc.) current location of the user is obtained by the use of gps.
3. These details will be submitted to an online database.
4. After logging in, the user will get a screen with 2 tabs.
5. **Tab 1:**

* it will contain a set of questionnaire which the user has to reply using radio buttons.
* Based on the answer provided by the user, an intelligent tree algorithm will run and 1-3 best results will be provided from the online database.
* Clicking on each result will provide the user with the description of spots/locations along with the pictures. The user will also have the option to view the exact location of the spot on Google map

1. **Tab 2:**

* This section allows user to make a manual search for various tourist locations by country, city area, name of place.
* **Admin Dashboard (Dot net Application):**

1. Admin can operate the system from a web application through his browser.
2. The system also consists of an admin dashboard where admin can login and enter places into the database with images, information, type of location and position on maps.
3. Also admin can add edit the questionnaire for the user to fill.

* **Hardware Requirement: -**
* i3 Processor Based Computer
* 1GB-Ram
* 5 GB Hard Disk
* Internet Connection
* Android Device
  + 1 GB RAM
  + 4 GB ROM
  + Processor 1 Ghz Dual Core or Higher
* **Software Requirement:**
* Windows 7 or higher
* Android Development Toolkit(ADT)
* Visual Studio 2010
* SQL Server 2008
* Android 4.0 or higher

**ADVANTAGES**

* This system solves all problems of the client just by asking some questions. And it provides three best options that fit into user’s requirements along with the place details and facilities.
* It saves their money and time in finding and consulting a travel agency where they charge more.

**DISADVANTAGES:**

* May get inaccurate results if data is not inserted in correct manner.
* Requires an active internet connection

**CONCLUSION**

The conclusion of this work is that we can now design a knowledge base system which will be built on the study of human’s behavior and adopting the human intelligence in the machine. It will help in designing the efficient, fast searching artificial intelligence algorithms with optimization. It will provide the structured database, each place with its short description, timings, ratings etc with GPS and GPRS. The geographical database of the places should also be built in order to provide proper navigation system. The system will provide the information such as description about POI’s, timings, cost evaluation and shortest path finding.

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**Signature of Student**

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