**Proposal for developing a smart-guiding automated system for tourists.**

**(Smart-GAT)**

**Submitted By:**

Vardan [L]

Amrit Ganjoo

Himanshu Kumar

**ABSTRACT**

Rajasthan is one of the most admired tourist destinations in India, which attracts various tourists across the globe for its ancient forts, art and culture. Every other foreign tourist visiting India also travels to Rajasthan as it is a part of the Golden Triangle for various tourists visiting India. Despite our rich cultural heritage, the tourists visiting these places are unaware of the great historical events that took place during the medieval period. This often happens due to lack of information by our own people working as tourist guides as they are unable to clearly describe the actual facts and figures to those ambitious tourists (guests) who are eager to observe our exquisite carving work that has survived till date and still receives appreciation from people worldwide.

So we are developing a smart guiding automated system for tourists (Smart-GAT). This would help tourists to understand the exact information of each and every section of that location via headphones when they tend to come closer to the place and even written text regarding the complete history of that location shall be provided. This would greatly solve the problem of ignominious guides and the visitors would be self-entertained by our system. They could easily enjoy the beauty of the place along with the correct information being provided by our system.**THE PROBLEM WITH TOURISM IN RAJASTHAN**

Rajasthan, honorably mentioned in the ***LONELY PLANET***, is a perfect and one of the most prominent tourist spots among the visitors both domestic and foreign. But in the recent years, tourists in Rajasthan have suffered a major blow, ranging from **Over-Charging Guides** to Connectivity Problems, “a latter might have existed since the beginning of time”. All of this has made the sightseeing, less of enjoyment and more of business.

The major problem in Rajasthan is **Discrimination:**

In most historical monuments, there is different pricing for **domestic** and **foreign tourists.** This generates a feeling of alienation among the visiting tourists and is also against our philosophy, ***”Vasudev Kutumbkam***”, which means “***the world is one family*”.**

Also, there is a **Lack of Communication Facility:**

In Rajasthan, there are **poor telecommunication** in terms of limited internet accessibility and difficulty of international calling and also some local calls across states. This often creates a sense of isolation amongst the tourists as they feel being deprived or cut-off from their near and dear ones.

**Tourist Guides:**

Despite the fact, that there are forts and palaces, heritage hotels, colorful fairs and festivals, local art and handicrafts which has been a unique selling proposition for tourists coming to the state but there are no genuine guides to tell each and every intricate details of the events that took in that place in medieval period, which causes another prominent problem -**the tourist guides in that areas**. Only 25% of the guides are **registered guides**, who actually know something about the area, whereas the remaining are some private guides which either don’t know anything about the area or have very little knowledge which leaves a bad impression to the visitors.

As a result, the tourists are not able to enjoy the beauty and history of Rajasthan in the true sense.

Moreover, the slogan ***“ATITHI DEO BHAVA”*** is no longer observed because the problems faced by the tourist’s remains the same every year and there is no serious efforts being made by the administration or government to address the same.

**But what would happen, if the tourists are able to enjoy the whole heavenly beauty of RAJASTHAN all by themselves without worrying about any GUIDE or DISCRIMINATION related to many.**

**REQUIREMENTS:**

Hardware specifications:

1. Arduino Uno R3
2. Class 10 Memory Card 16gb
3. Powerbank 4000 mah
4. 3.2 inches TFT LCD touchscreen
5. RFID-RC522 module
6. Audio jack adapter 3.5mm
7. Chassis
8. Male to female, female to female, male to male connectors
9. Micro-SD card adapter
10. Full breadboard
11. BC 546b NPN transistor
12. 7k resistor

**CURRENT RIVALS**

Basically, the device being used is based on radio transmission which requires an RFID Module. Also it is not much consistent as it needs buttons to be pressed in order to change tracks. There are also chances for background noises to interfere with your hearing. So, to solve this, we have provided with a device which is more efficient in terms of usage and functioning.

**HOW Self-GAT WORKS**

**FRONTEND USAGE:**

Each monument would be fitted with a card, which basically is an IDENTIFICATION DEVICE with UID. The tourists would be provided with a device built with Arduino, an LCD screen 3.5MM jack and most importantly an RFID sensor. The sensor in the device would have to be brought near the card and scanned. Once it scans the card, the whole information would be displayed as text on the screen and by connecting the headphones, you can also hear the audio. Internal speakers will also be attached with the device in order to amplify the audio and background cancellation.

**BACKEND USAGE:**

All the text and audio file would be included in the arduino coding, which would remove the hassle of Wi-Fi transmission from the card to device. Just by scanning the code, the device would access the data of that particular area and would display on the screen and the audio would be heard.

**TEAM MEMBERS AND THEIR ROLES**

**Vardan:** Team Leader, most INNOVATIVE PERSON in the group and our front-end developer.

**Amrit Ganjoo:** Motivator, the main lead behind making hardware.

**Himanshu Kumar**: Geek, “Trouble-shooter”