GuideBot

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Use case/ Abstract:

In our today's environment whenever a we are entering into big organization/ Building, for the users those who are visiting the place for the first finds difficult in navigating throughout the building. Then for reading/ querying related to book the user will have to find and wait in library helpdesk. If a user located at a remote area wants to navigate to another place will be an impossible task nowadays. So, for this problem we provide an application that supports guidebot navigation for indoor, Virtual environment and scanning for self-assistance.

Introduction:

This application provides various virtual assistant support for the first-time problems faced by many users in navigating in a very large environment also help in virtual navigation. The main features provided by the application are likely,

- Indoor navigation
- Virtual Remote navigation
- Object Scanning
- Detailed guidance

Indoor Navigation:

This feature helps the user when they find difficult in identifying places in an environment. This application contains the entire map and waypoints on each and every point of interest in the building. So, in order to reach the destined point of interset, the user will have to scan the environment and will have to choose the

point of interest that he/she has to navigate. Once all the required parameters are given to the application the virtual guidebot will guide you to your destined Point of Interest.

Virtual Remote Navigation:

This feature helps the user for on spot navigation to another place which is located remotely. The application contains the virtual 360-degree picture and also the attributes of the remote place. The virtual bot will guide us to the remote area from on spot and the user can able to see the remote area along with its properties. A museum is given as Virtual Remote navigation in the application where the user can navigate to museum from on spot and also can able to see the details of sculptures.

Object Scanning:

This feature helps scanning the objects around and helps the user in answering the queries related to that particular object. Book scanning is given in the application so as whenever a user scans any particular book the application receives the knowledge of that book. So, if a user ask query related to that book the virtual bot will be providing answers related to that book.

Detailed guidance:

This feature shows the detailed description about the image captured. The application shows a particular shops discounts and offers upon recognizing the shop based on its identity.

Technology Stack:

Hardware (Smartphone):

- Android Pie/ iOS
- Qualcomm processor
- 8 GB RAM
- 128 GB Memory

Software:

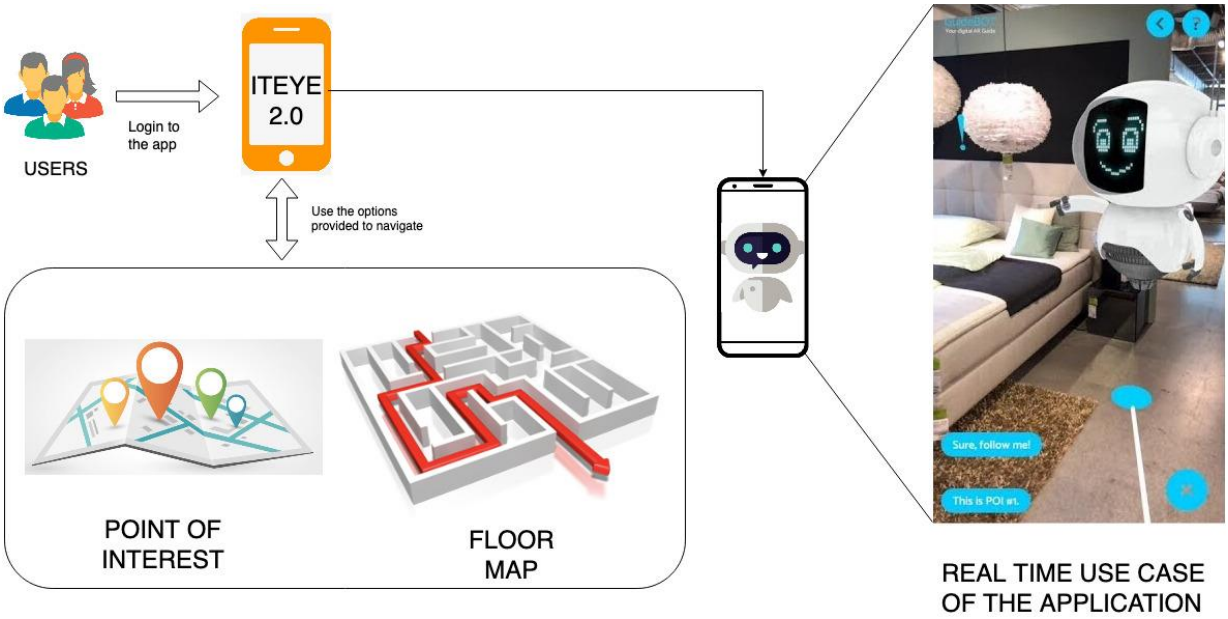
- Visual Studio Code
- React Native

- ViewAR SDK
- Unity3D
- 3D Object Models
- Command Line Interface

Working Methodology:

- Upon entering into the environment, the user will have to scan the surrounding place for indoor navigation. Then choose the POI listed and the virtual bot will navigate to the destined place.
- For Virtual navigation move the navigate smartphone to the virtual environment. Then point to the object present there to know the details.
- Scan any book then the guidebot will process the books knowledge from library. Then the user can ask any queries related to that book and the Virtual bot will answer it.
- Scan any shop then guidebot will process the image and finds the shop identity then the offers and discounts will be displayed as Augmented Reality.

Workflow Architecture:



Conclusion:

Thus the, application provides an enterprise collaboration platform for digitizing user navigation and virtual guidance. This solution enables the user to avoid the

first-time problems faced by many users upon entering into a new environment. Also, user navigation will be reduced if Virtual navigation is used. User can independent without having the dependency of another user for guidance.

YouTUbe Link

https://youtu.be/ANtRSFg2iLc