

#23B08

# TravelAR

An AR based Application for Travel Assistance

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TravelAR is an android app for travelers. It provides features like choosing the correct destination, making bookings, and organizing the trip. It provides solutions for every problem a traveler might face during their journey. It provides a comprehensive list of information about a destination: current weather, best places to hang out, and the city's current trends.

And most importantly, it uses AR features to view the destination in augmented reality by just sitting at your own place. The user just has to click on the AR mode to switch to an augmented reality experience through their smartphones.

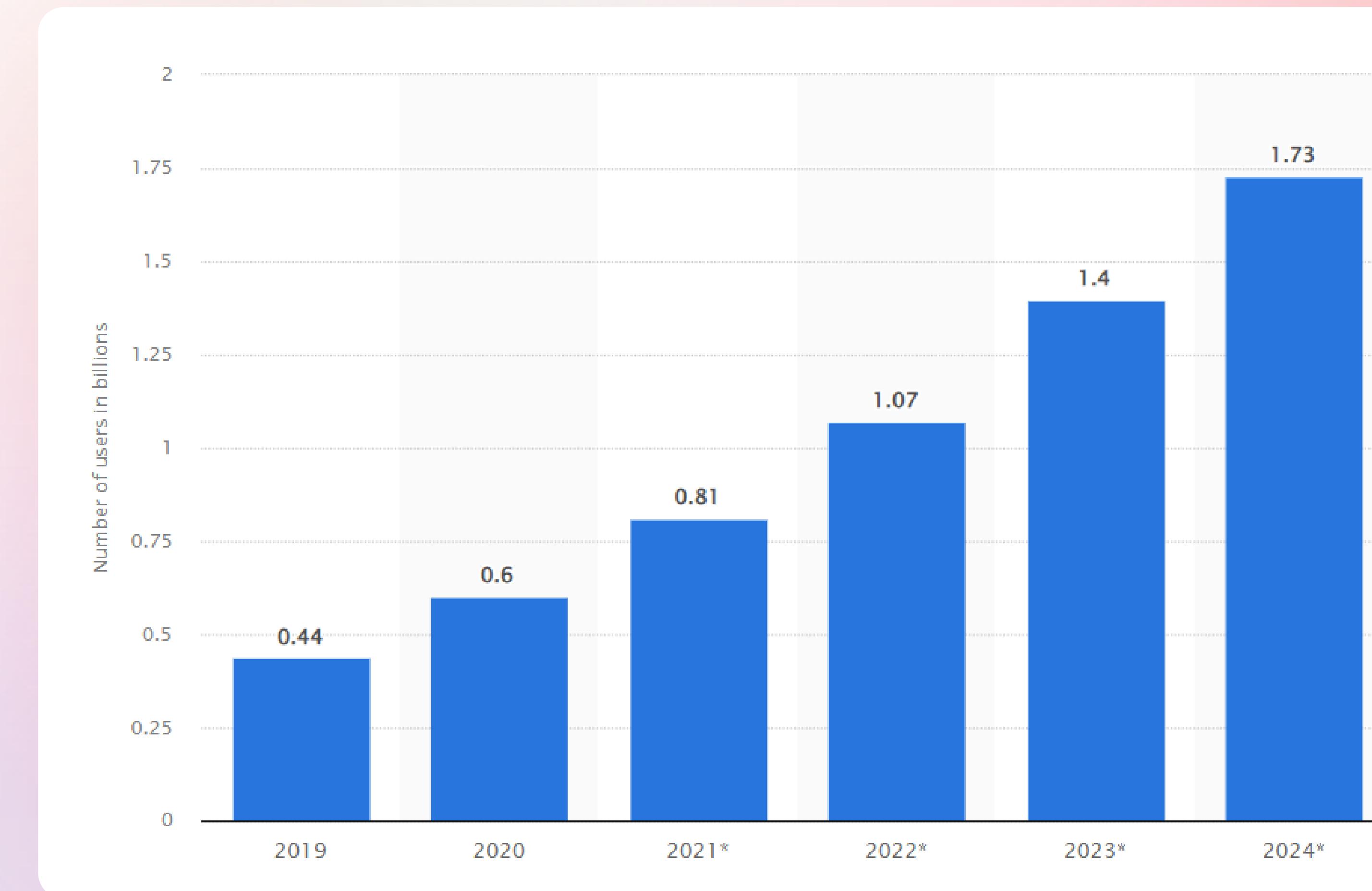


# What is Augmented Reality?

Augmented reality (AR) is an interactive experience of a real-world environment.

AR can be defined as a system that fulfills three basic features: a combination of real and virtual worlds, real-time interaction, and accurate 3D registration of virtual and real objects.

# Why Augmented Reality?



Number of mobile augmented reality (AR) active user devices worldwide from 2019 to 2024(in billions)

# Application Areas Of AR



Healthcare



Education



Tourism



Entertainment

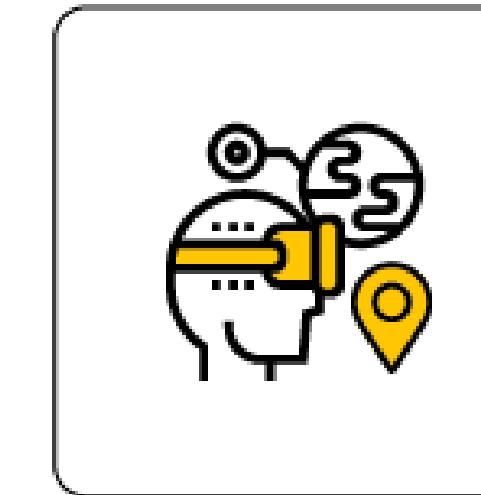


E-Commerce

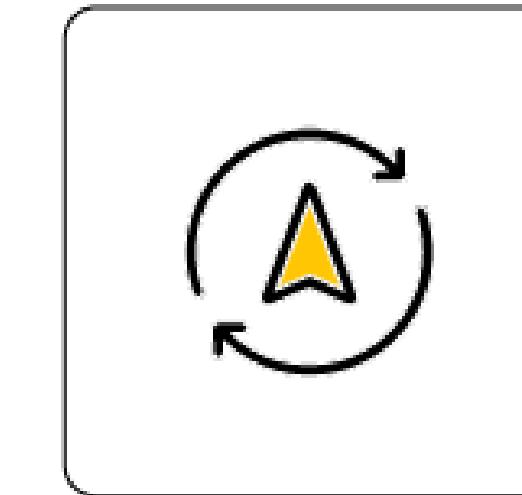
# Application Of AR In Tourism



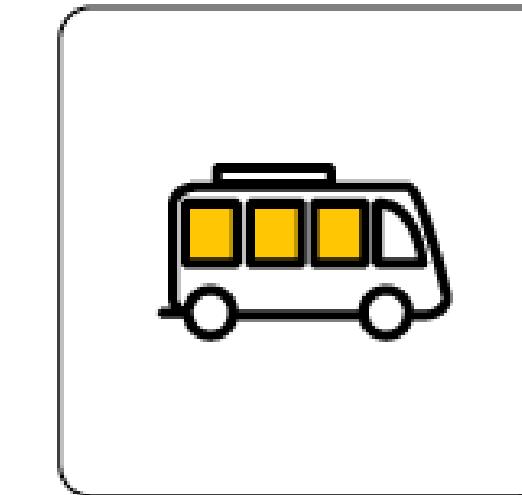
Interactive  
Hotel Elements



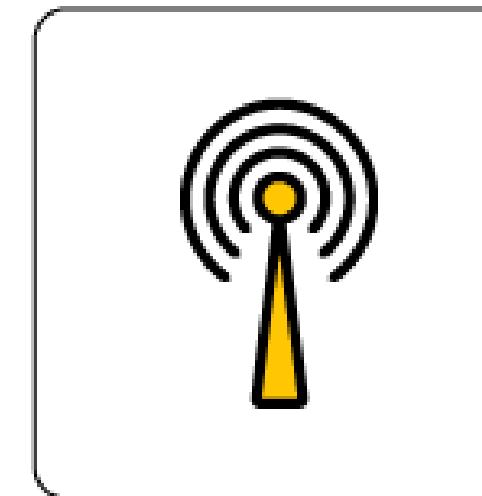
Augmented  
Tourist Destinations



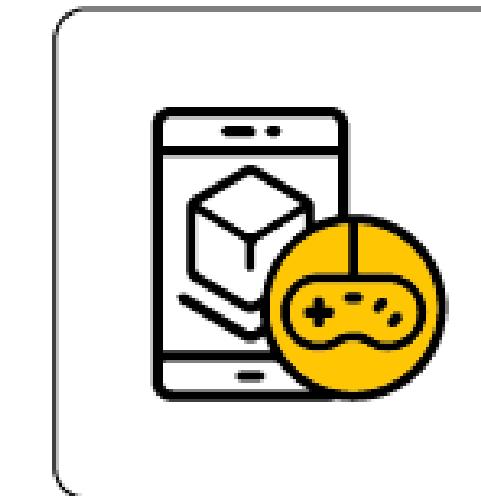
Immersive  
Navigation



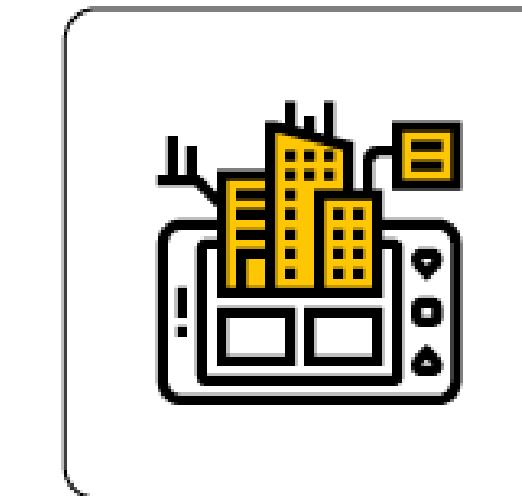
Improving  
Local Transit



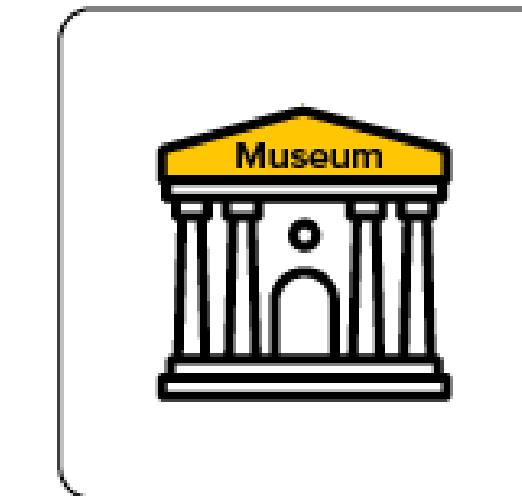
Beacon Technology  
and Push Notifications



Augmented Reality  
Gamification



AR for City Tours



AR for Museums

The Global AR VR In Travel And Tourism Market Ecosystem Was Valued At US\$ 74.6 Million In 2018 And Is Expected To Reach US\$ 304.4 Million By The Year 2023

# TravellAR

## Features Involved

### Geolocation

Navigation and maps are essential for a travel app. So, a map is the base of the application, and if the user wants to use a map in-app and not switch to a different navigation app, the travel map will work offline. And the way to do it is to have a geolocation feature. It will be using Google Maps SDK for iOS and Android that provides the app with the map itself.

### AR destination Viewing

The app will let the user use the AR feature to view the destination in augmented reality by just sitting at your own place. The user just has to click on the AR mode to switch to an augmented reality experience through their smartphones.

### AR destination description

This feature will display a short description as well as an audio option to describe the searched place.

## Shortest Path Navigation

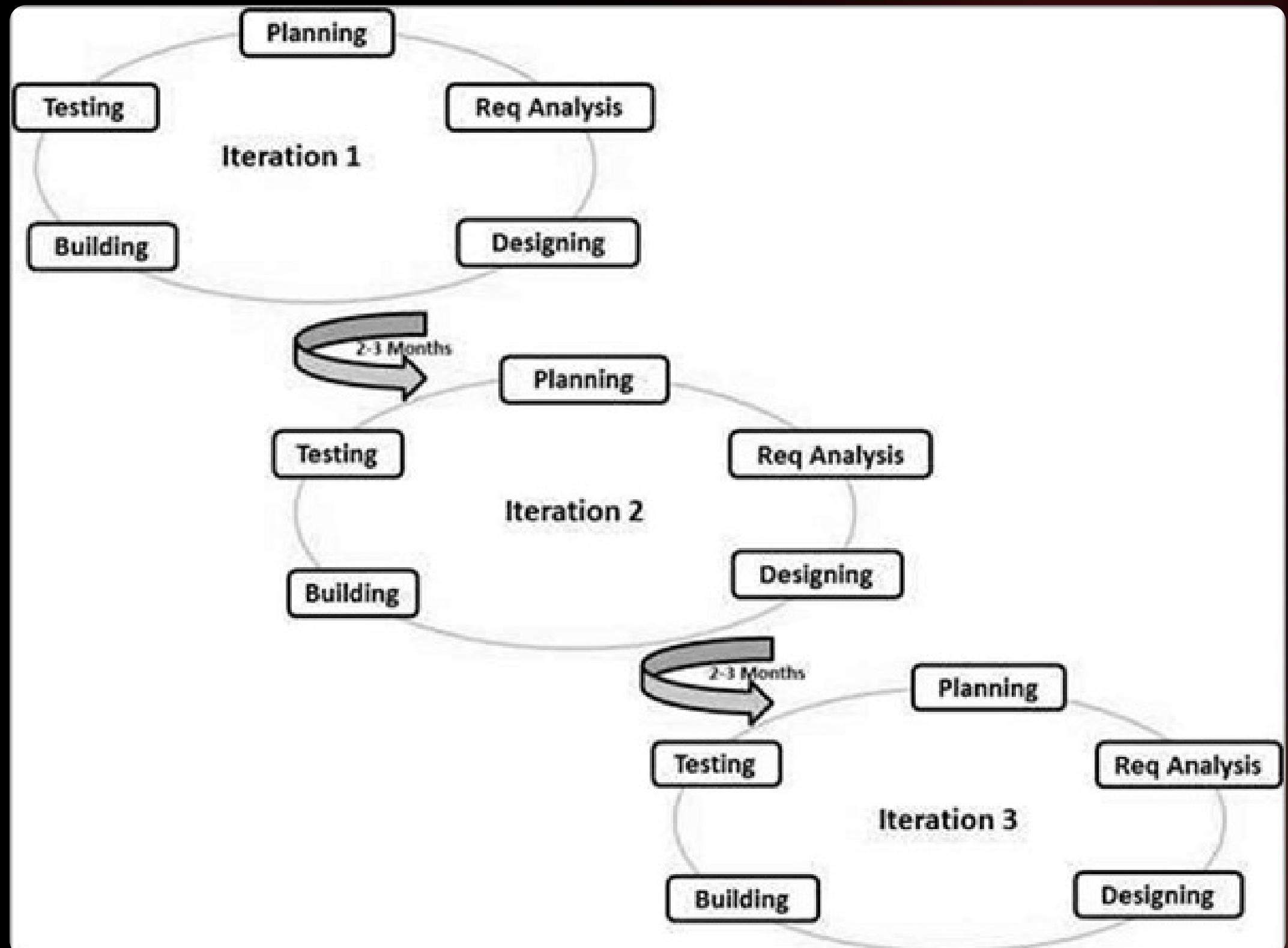
The user can travel from one destination to the other in the shortest route/path possible. The module will use the shortest path algorithm for finding the shortest path.

## Weather forecasting

Weather conditions always have a massive effect on travel plans. So a weather feature in a tourism app is given in the application. A real-time climate forecast can let users book their trips without concern about the weather conditions.

## Some other features..

- Cross language assistance
- Virtual assistant
- 2D QR codes
- View savepoints on the map



# Methodology Used

For this project we'll be using the Agile Software Development methodology approach in developing the application. The stated approach is an alternative to the traditional waterfall model that helps the project team respond to unpredictability through incremental and iterative work. It promotes adaptive planning, evolutionary development, early delivery, continuous improvement, and encourages rapid and flexible respond to change.

## Popular/Must Visit places around the destination

This feature will give the user a list of the popular places around the destination that he/she should not miss out on. It may also include restaurants for every eating type in augmented reality.

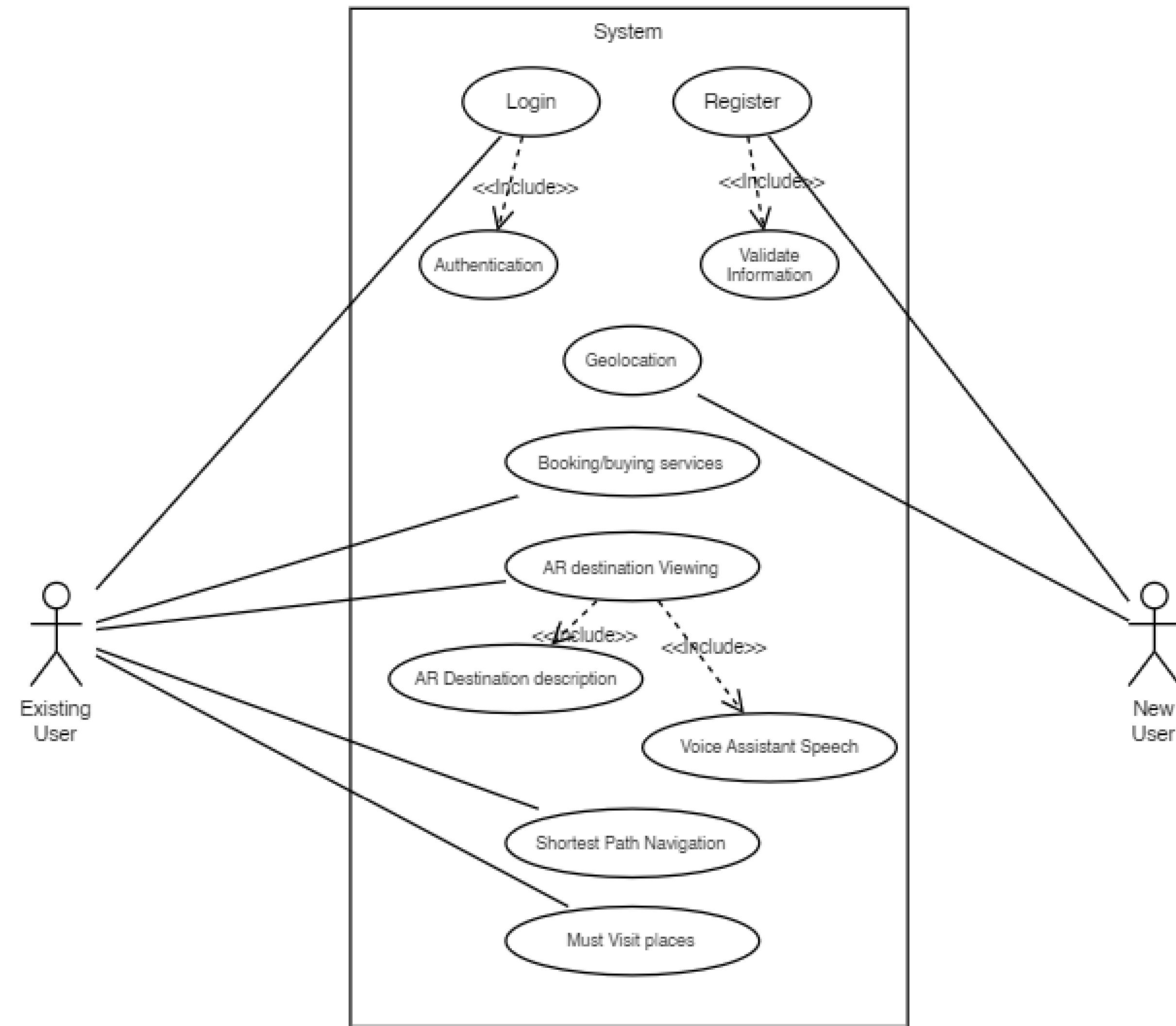
## Booking/Buying Services

AR travel app will also be having the booking or buying feature. The app will provide them with the ability to book hotels, restaurants, tickets, and sightseeing tours.

## Reviews and Recommendations

Customer feedback, review, and rating blocks will be there in the travel mobile app. People want to be able to review places and share their experiences with others.

# Working



# How Are We Doing It?

## Unity 3D Version (2020.1.16)

The Primary Software For The Development Of The Project. Unity Is A 3D/2D Game Engine And Powerful Cross-Platform IDE For Developers. We Have Used Unity 3D For Developing The AR Module Of The Application.

## Vuforia Engine (Version 9.6 )

An Augmented Reality Software Development Kit For Mobile Devices That Enables The Creation Of Augmented Reality Applications. It Uses Computer Vision Technology To Recognize And Track Planar Images And 3D Objects In Real-Time

## Flutter/Dart Language

Flutter/Dart Is A High-Level, Class-Based, Object-Oriented Programming Language That Is Designed To Have As Few Implementation Dependencies As Possible. It Is A General-Purpose Programming Language.

# How Are We Doing It?

## Google Mobile Services (GMS)

It Is A Collection Of Applications And Application Programming Interfaces (APIs) Developed By Google For Manufacturers Of Android Devices, Such As Smartphones And Tablets.

## Some Important APIs

Google Service API

Google Location API

Google Directions API

Google Maps API

Google Distance Matrix api for calculation of distance traveled

GPS using Geolocation API

Web speech API

# Thank You

Suggestions are open...