



**UTM**  
UNIVERSITI TEKNOLOGI MALAYSIA

**FACULTY OF COMPUTING**  
UTM Johor Bahru

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SECP 1513: Technology Information System  
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## PROJECT PROPOSAL

# TraveLens

**Team Name:** TicTECHToe

**Team Members:**

1. NUR ALIA ATHIRAH BINTI SUZUDDIN (A24CS0153)
2. SITI NUR IMAN NADHIRAH BINTI MOHD FAIZAL (A24CS0192)
3. CHIN WEI YAO (A24CS0234)
4. KOH ZI QIAN (A24CS5036)

**Client Name:**

1. NOR FARHAIN BINTI SARMIN

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## ***1) Introduction***

Travelens is an innovative augmented reality (AR) glasses that can revolutionize the way tourists explore a new destination. Capable of displaying real-time navigation, Travelens overlays virtual arrows, street names, and directions directly onto the user's field of view. By reworking hands-free navigation, it eliminates the need to use either smartphones or maps, enabling travelers to enjoy an immersive experience while walking through a city.

As the pace of life is faster than ever, it is difficult for tourists to find their way around the harsh environment. These conventional methods of paper maps or the smartphone applications available these days cause terrible experiences where user need to be looking down time and again to realign the path. This may cause confusion, missed right path, or even safety concern in busy areas. Travelens provides real-time navigation, helping users to focus their attention on their surroundings while enhancing the entire experience of travel.

Travelens combines advanced AR technology with GPS and superior mapping technology to provide step-by-step navigation. The glasses are lightweight, stylish, ergonomic for user's comfort, and feature a high-resolution display for the user to view. Users will easily enter their destination via voice command, and the glasses' navigation will be displayed directly on the path ahead to create an easy-to-use experience.

This AR glasses provides numerous advantages to the user. It allows the users to see the real scenery, freeing up their hands. In addition, they can get real-time updates so that they don't get into trouble for taking the wrong route or miss any important landmarks that the traveler will pass on the way. In addition, Travelens also improves safety because users can keep their heads up to be alert for traffic, pedestrians, and other potential hazards.

Many companies provide AR devices or navigation apps, but no company integrates all of these into a cohesive, travel-specific product such as Travelens. For example, Google Maps offers navigation but does not offer immersive AR. Similarly, there are a few AR glasses that exist, and none of these have focused applications for tourists. Travelens uniquely positions itself within the market by concentrating on the special needs of journeys and offering unmatched hands-free navigation.

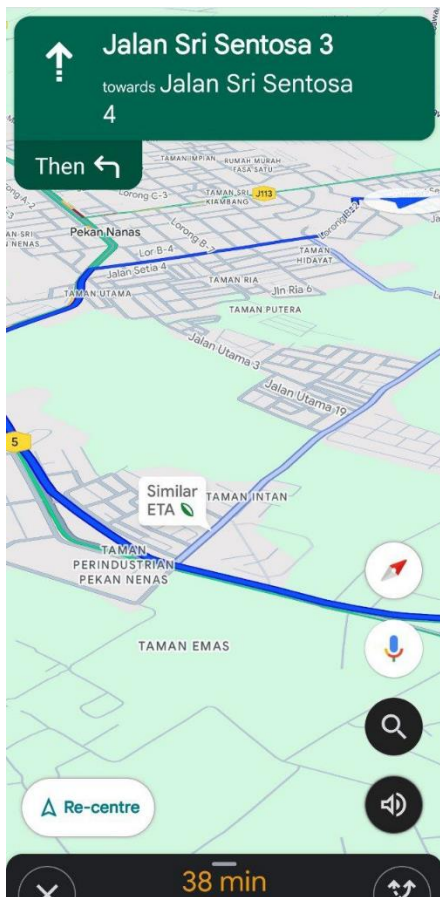
Travelens reinvents navigation for the modern-day explorer to make explorations safer, wiser, and more enjoyable. In addressing the problem with the existing solution, it furthers the enjoyment of discovery by going all the way to making the tour seamless and trouble-free for world tourists.

## 2) Existing System

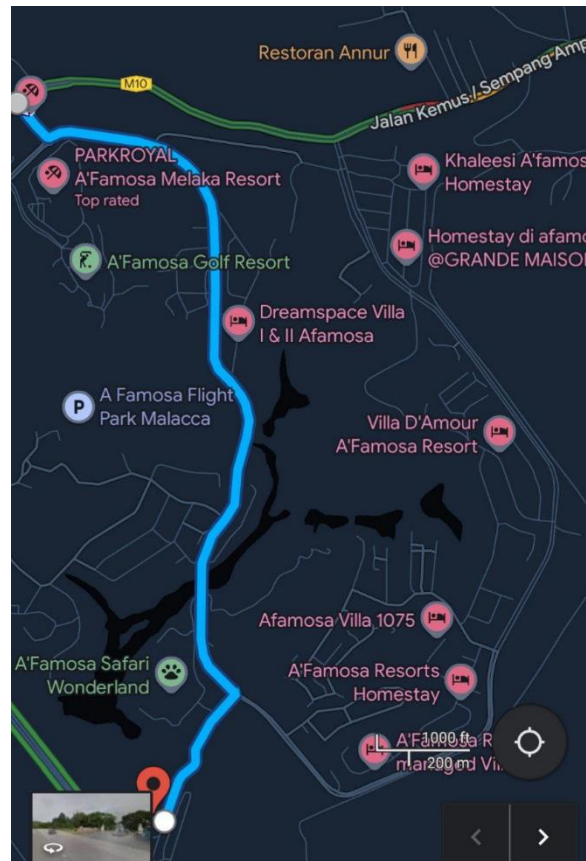
Table 1 : Comparison of existing systems

Features	Travelens	Google Maps	XReal Air 2
Provide Real Time Navigation	Yes	Yes	No
Augmented User Interface	Yes	No	Yes
Landmark Identification	Yes	Yes	No
Shortest Route Generation	Yes	Yes	No
Virtual Assistant	Yes	Yes	Yes
Multiple Route Options	Yes	Yes	No

### Screenshots of Google Maps

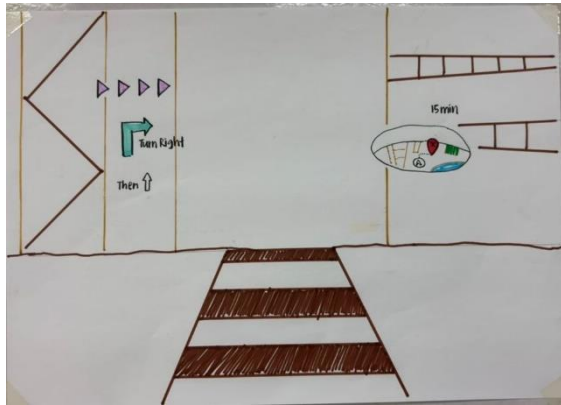


Multiple Route Options

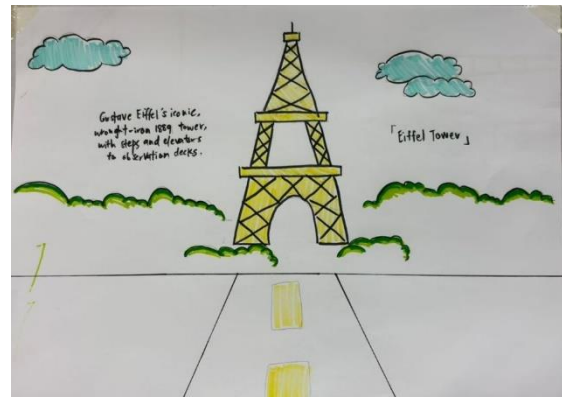


Landmark Identification

## User Interface of Travelens



Provide Real Time Navigation



Landmark Identification

### **3) Proposed System**

The proposed system included provide real time navigation. Travelens provides live, step-by-step guidance through the process of overlaying navigation display directly into the field of view. Virtual arrows, directions, and street names will be displayed seamlessly on the road ahead so users can stay on course without looking down at a phone or map. Such real time functionality will enhance user experience in the most intuitive and hassle-free way.

Besides that, the AR glasses can also provide an advanced user interface, projecting vital navigation information like street names, distances, and directions onto the user's view. In such a way, it lets users have all the details they need right in front of them, making every travel convenient and efficient. The unobtrusive interface is designed to blend seamlessly with the environment, allowing for effortless exploration.

Travelens able to highlight landmarks that fall on the way and may be a valuable addition to the journey the user is making. If the user passes through a crowded place, it will provide context about the surrounding environment, thus helping users have a more interesting and informative journey. It is also useful for tourists traveling to new cities or cultural areas.

The glasses calculate and generate the shortest and most efficient route to the destination using advanced algorithms and display it. Whether users want to save time or minimize walking distance, Travelens ensures that they reach their destination quickly and conveniently. This feature is very useful in urban environments where time and efficiency are often a priority.

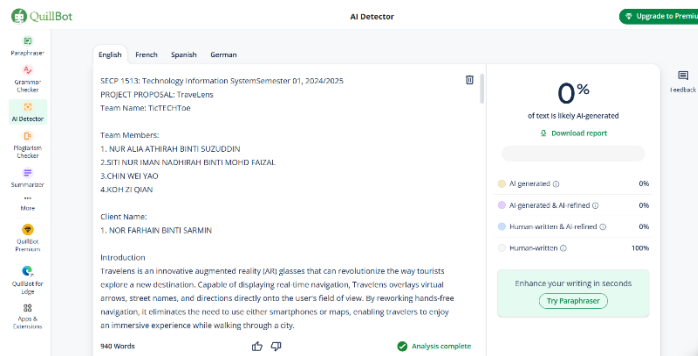
It also fosters easy navigation through Travelens by incorporating a voice-enabled virtual assistant. It allows users to set their destinations, adjust their preferences, and even ask for travel tips through simple voice commands. The response time of this assistant is very fast-a good fact for users to act hands-free while it reduces manual typing. Thus, it further enhances usability.

Travelens also proposes multiple route options according to the user preference. Be it a scenic path, avoidance of crowded routes, or those stopping at a landmark, suggestions will be tailor-made by these glasses. That would give people much flexibility and freedom to really customize how they take their journeys and explore unique interests and priorities.

#### 4) **References**

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- ✓ Teneo.ai. (n.d.). *Voice-activated virtual assistant*. Retrieved January 20, 2025, from <https://www.teneo.ai/learning-hub/call-center-glossary/voice-activated-virtual-assistant>

# Appendices



## AI Detector - Advanced AI Checker for ChatGPT, GPT-4 & More

Can AR glasses reliably provide tourists with real-time navigation to explore new destinations?

Yes, AR (augmented reality) glasses can reliably provide tourists with real-time navigation to explore new destinations, though the reliability depends on several factors. Here's an overview of how AR glasses can perform in this role and what might influence their effectiveness:

### Advantages of AR Glasses for Navigation

- Visual Guidance:** AR glasses overlay navigation instructions, such as arrows or landmarks, directly onto the user's field of view. This eliminates the need to glance at a smartphone, making it easier to stay focused on surroundings.
- Real-Time Information:** AR glasses can provide dynamic, real-time updates about routes, attractions, and points of interest based on location data.
- Hands-Free Experience:** Tourists can explore without holding devices, making the experience more immersive and safer, especially in crowded or unfamiliar areas.
- Personalized Recommendations:** Some AR systems integrate with AI to offer tailored suggestions, such as nearby restaurants, cultural sites, or events, based on preferences or

What is the average battery life of AR glasses during continuous use for navigation?

The average battery life of AR glasses during continuous use for navigation typically ranges from 2 to 5 hours, depending on the model and specific use cases. Here's a breakdown of the factors that influence battery life:

### Key Factors Affecting Battery Life

- Processing Demands:**
  - Continuous navigation involves heavy use of sensors (GPS, gyroscopes, accelerometers), real-time mapping, and AR overlays, which can drain the battery faster than passive use.
- Display Type:**
  - Glasses with high-resolution displays, such as OLED or microLED, consume more power compared to simpler projection-based displays.
- Camera Usage:**

<https://chatgpt.com/share/678dfae3-70b4-8009-bc3a-9c6054d1f538>