



Ray-Ban Smart Glasses

Designing a better navigation experience for people with **Vision Impairment**.

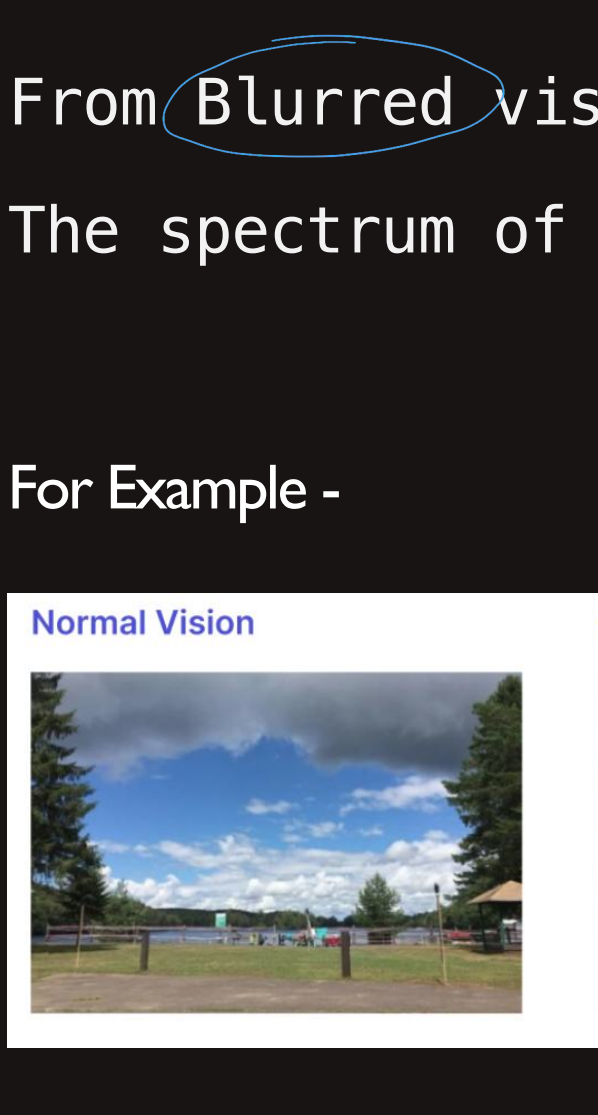
- College Project
- Timeline: 3 months
- Type: Research, UX Design, Accessibility

What is this about?

This is an Audio-Visual Wayfinding Concept design using Smart Glasses.

This involved adding elements to the smart glasses and redesigning usability of the existing smart glasses to overall improve accessibility for target users.

Target Users



From Blurred vision to complete Blindness.

The spectrum of vision impairment is wider than we realise.

For Example -



My Role

- User Research
- Information Architecture
- Wireframe
- Prototype

Goal of the Project

The goal is to provide PLV users a way to navigate more seamlessly using smart glasses.

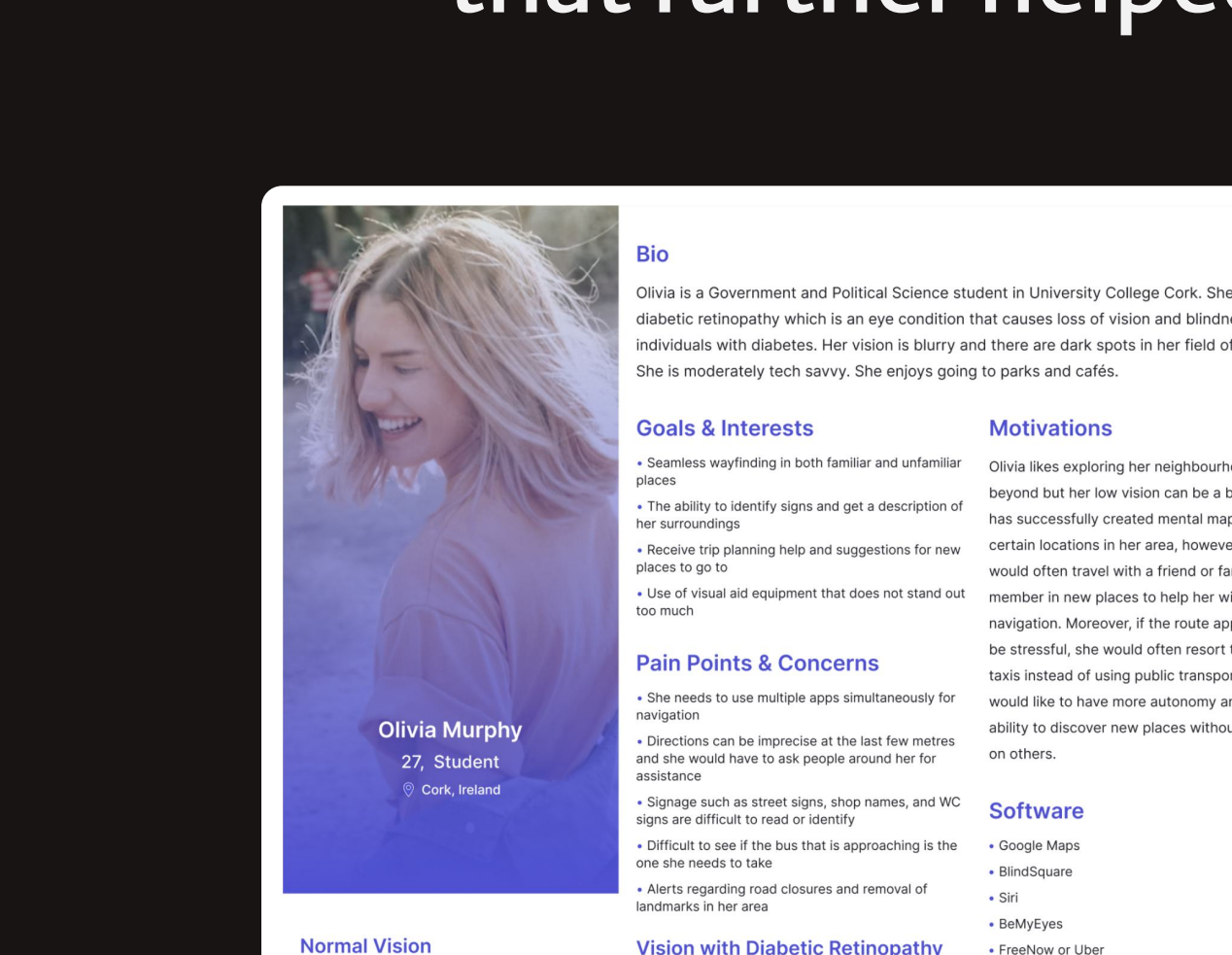
To achieve this goal:

Background Research was done to see what previous literature can be used in developing this product.

Research Findings

- Navigation Challenges for People with Low Vision (PLV) — most of the target users face this issue in life.
- User Interaction with existing technology is limited
- People feel awkward in social situation with current tools — Sticks & Black Glasses
- Design Requirements were gathered for product development

The Process



Double Diamond Framework

- Double Diamond Framework helped by structuring the creative process from understanding user needs and defining the problem to developing solutions and delivering a final product
- This methodological approach ensured a thorough investigation and understanding of the target users' needs, leading to more innovative and user-centered design outcome.

User Personas were created based on the research findings that further helped in creating User Scenarios.

The Solution

By enhancing an existing smart glass with new features like audio and visual feedback for navigation, object recognition, and stair mapping, the challenge of way-finding for people with low vision (PLV) can be addressed.

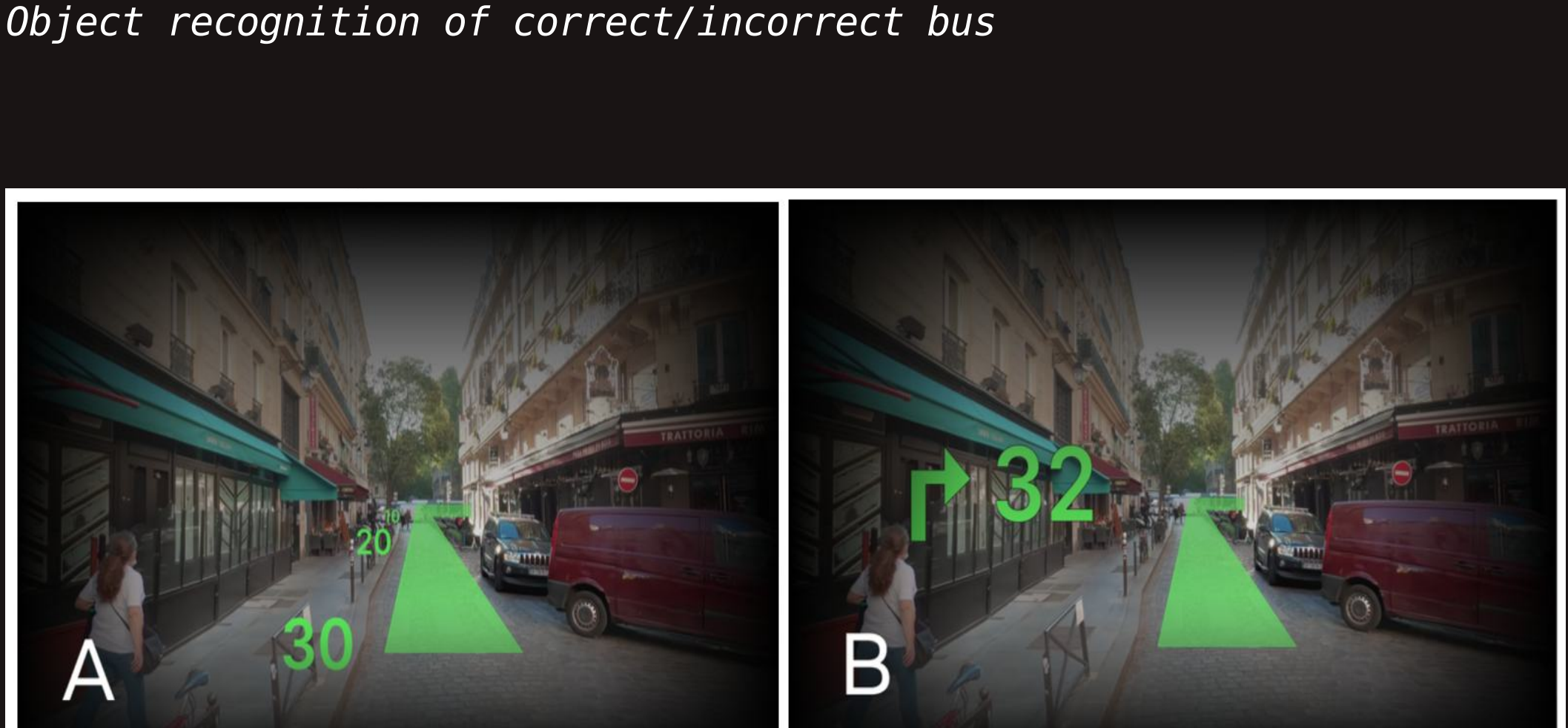
Users can take the following steps to use this feature:

- Ask the Voice Assistant
Using the words "Hey Meta", Users can ask the voice assistant for navigation to a location, or just to navigate the surrounding as well
- Object Recognition with the Camera
The in-built camera, can look at the surroundings and let the user know whats in front of them using Object Recognition
- Feedback via Speakers
The speakers built in the glasses can provide instructions to the user
- Gesture Control
One tap control can help users activate or deactivate accessibility settings for the smart glasses

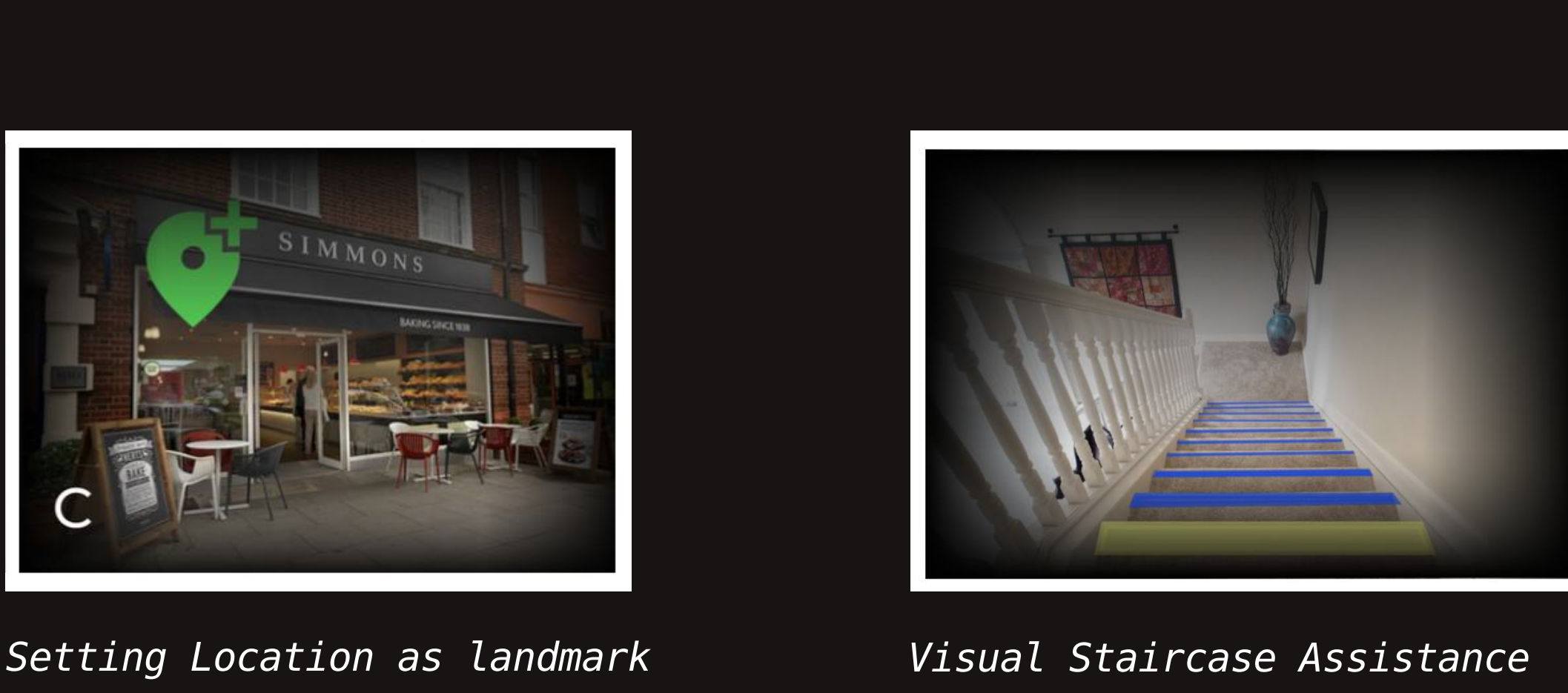
Taking it a step forward:

Adding a display screen at the glass section can provide users with even more precise object recognition and navigation.

Visual wayfinding interface concepts:



Object recognition of correct/incorrect bus

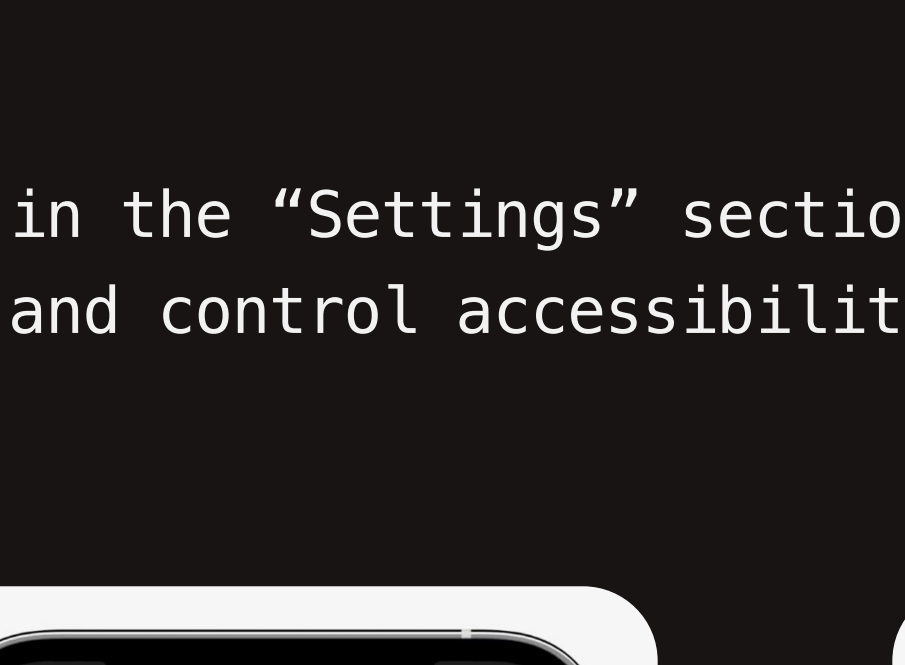


A: Anchored Signs

B: Floating Signs



Setting Location as landmark



Visual Staircase Assistance

Meta View App:

Adding an "Accessibility" option in the "Settings" section of Meta View app will make it easier for users to find and control accessibility settings.

