

Bridging Vision Gaps in University Spaces

FIND YOUR ROOM IN 2 MINUTES!



Did you know that there are no specialised support measures for blind people in higher education?

Limited Accessibility

VISUALIZE

Complex layouts: Multiple buildings and hidden pathways make navigation challenging, especially for visually impaired students, leading to higher dropout rates.

Inadequate signage: Lack of accessible tactile signs, braille labels, or auditory cues hinders independent navigation.

Inefficiency and Time Loss

Wasted time: Searching for rooms often results in lateness, particularly for first-year and unfamiliar students.

Difficult to find classrooms: Poor signage causes delays and missed classes, increasing frustration and anxiety, especially for visually impaired students.

Technological and Economical Challenges

Existing solutions are often expensive: High costs and additional hardware or Human Resources need strain budgets, preventing necessary improvements and affecting students' ability to navigate independently, impacting their academic success.



Why are we different?

• Our innovative navigation algorithm differentiates itself by offering real-time, multimodal navigation guidance through sound and vibration feedback from the device, ensuring a seamless and accessible travel experience for all users.



- The application's interface was entirely designed for blind individuals. With feedback from APEC, we developed an app that is easy to use and specifically tailored to the needs of the blind community.
- Adapted to the university campus, making it easy to find important spaces such as study rooms, atm, ...

28000 citizens are unable to see, even with glasses or contact lenses.



User Friendly

Accessible to all

No Hardware



of students consider the

Accessibility

• Simple and intuitive login page.

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- Home page with quick access buttons to the main university locations (canteens, libraries, study rooms, student services).
- Exploration page with visual and audio indication of current location.
- Navigation from user's location to selected destination, with constant vibration and sound feedback.

Our Results

Navigation

and Android

- Mapping: We implemented our maps using the Google Maps SDK, overcoming the limitations of existing maps.
- Drawing routes between the user's location and selected destination.
- Through vibrations and sounds, using data from magnetometer we are able to tell the user the direction of the next point on the route, until he reaches the destination.
- At the door of the pavilion, an announcer indicates the way forward.
- Integration with Google Maps for additional voice directions (shortcuts).

User	Visualize app	Backend server	Google Maps Platform	Navigation Algorithm
Selects De Asks for location	on permission			





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