



## Outdoor Walking Aid for the Blind

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### Overview

3% of children under 18 in the United States are visually impaired

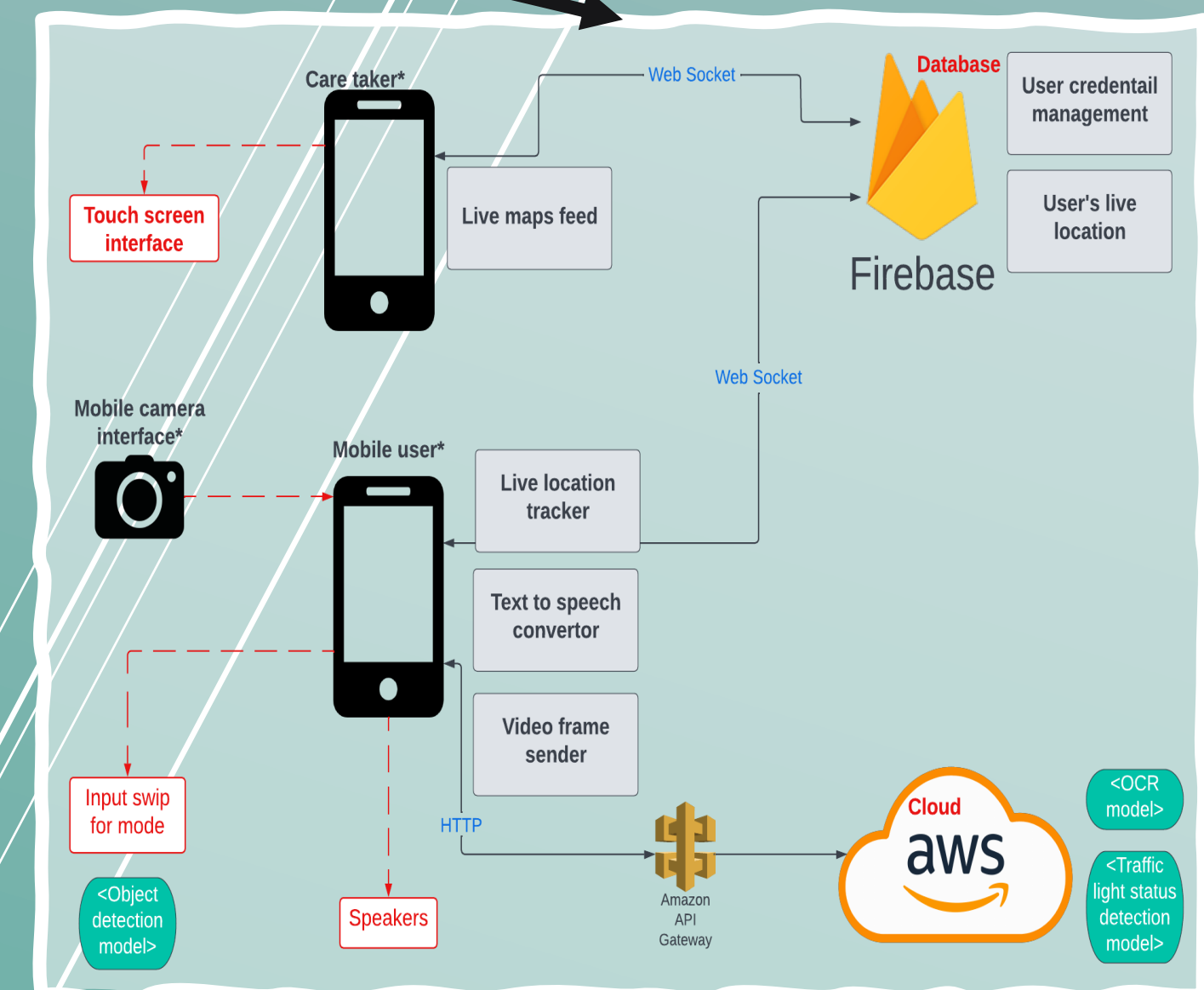
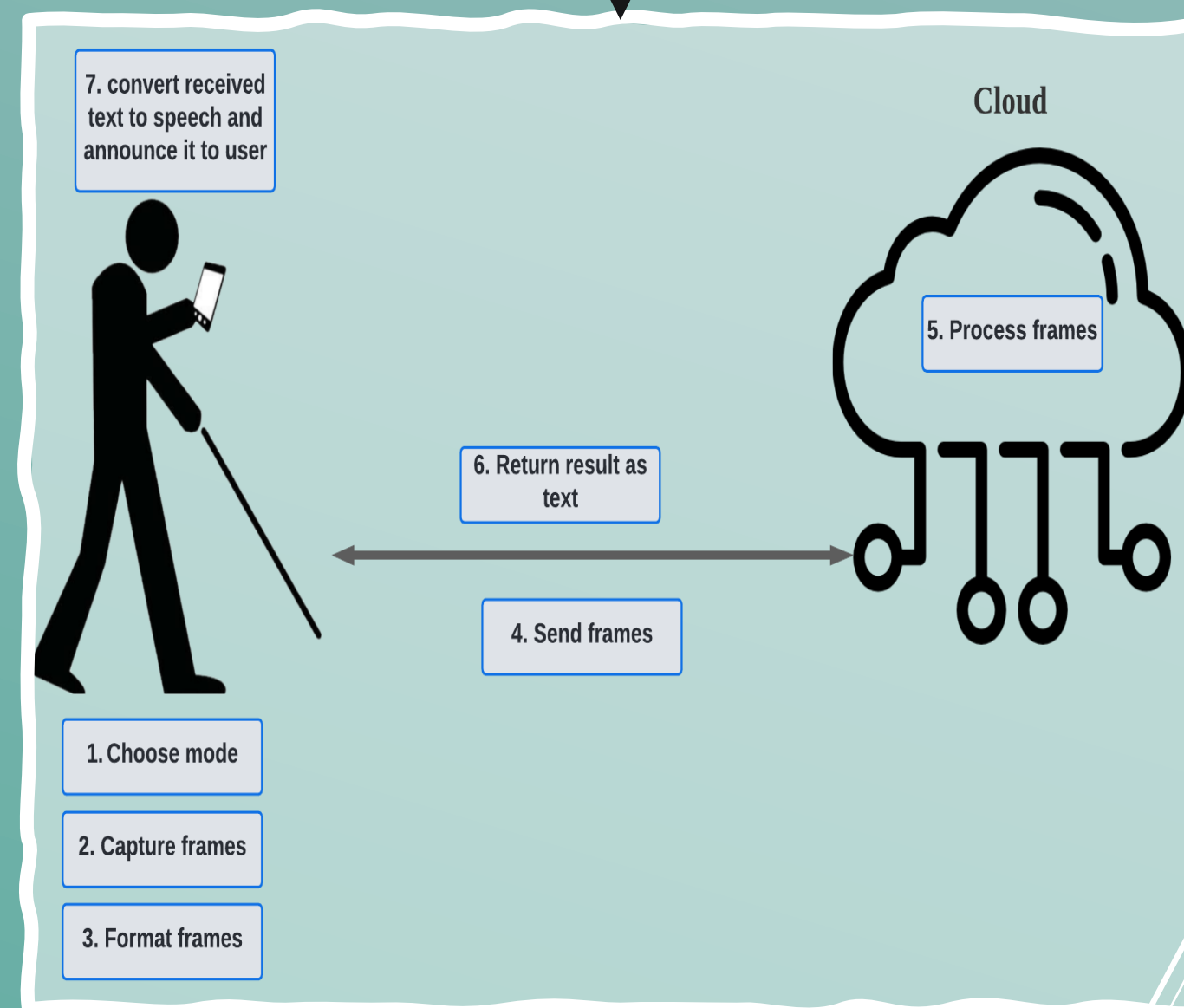
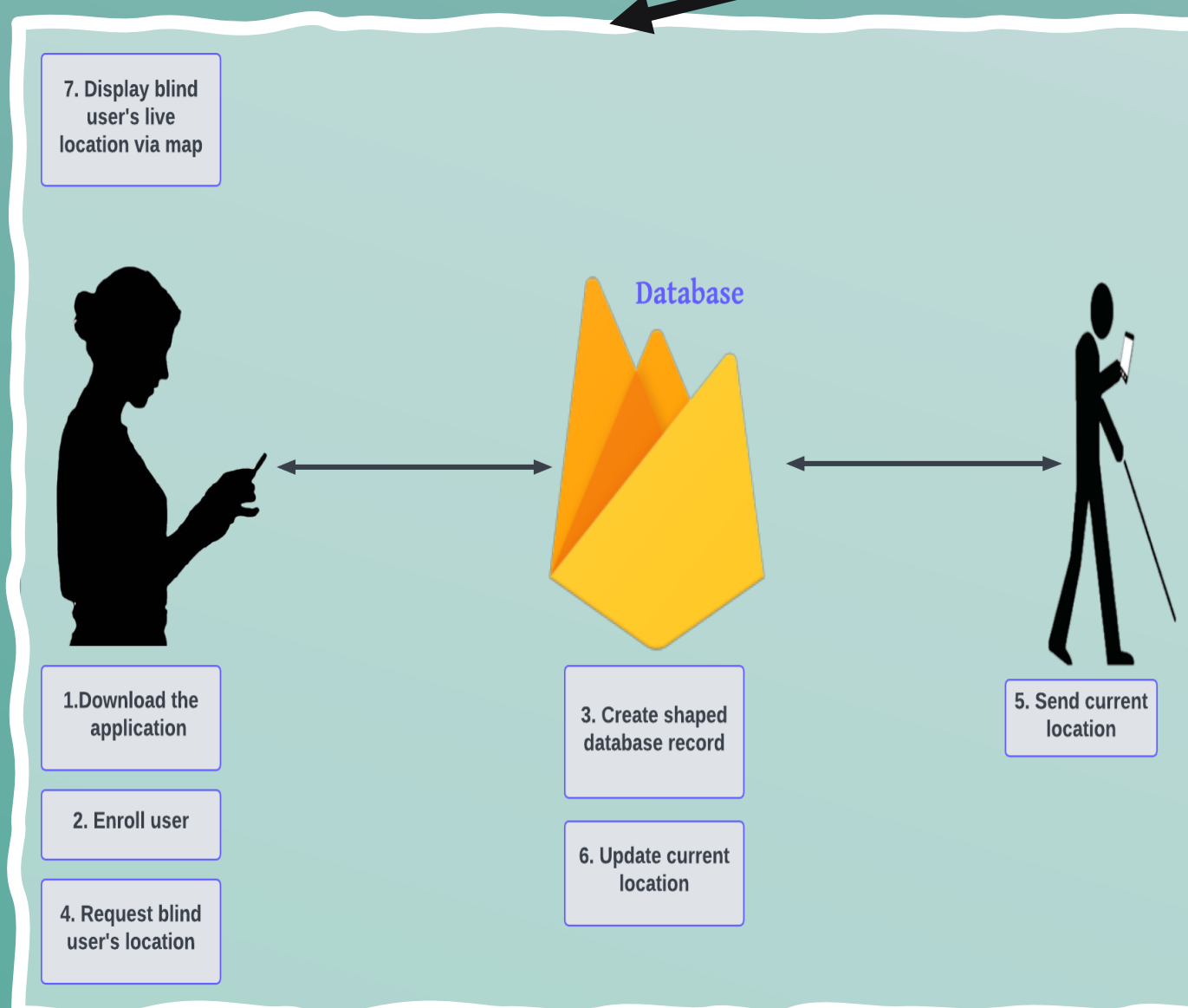
Visually impaired people express physical safety worries in outdoor environment

Commercial visual assistance equipment is too expensive

visually impaired faces difficulties in recognizing useful locations such as stations, buildings, and signage.

Most traffic signals in Saudi Arabia are not well adapted for visually impaired people.

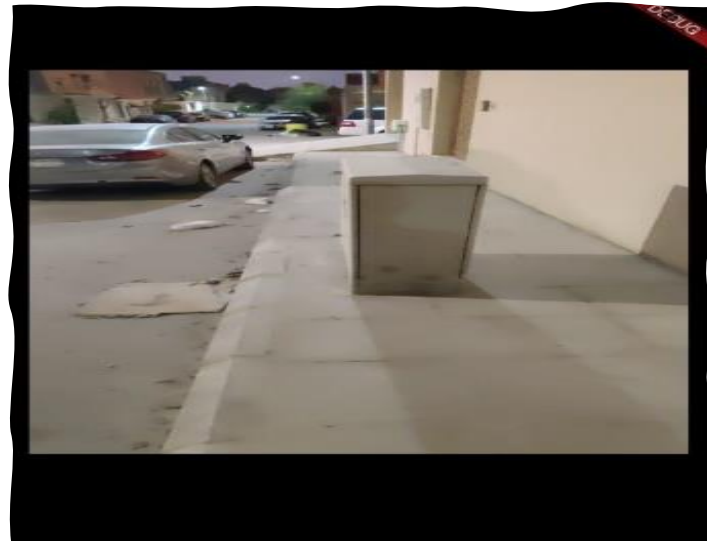
### Methods



### Outcome

Autonomous aid for the visually impaired

#### Obstacle detection



ashcan 0.20

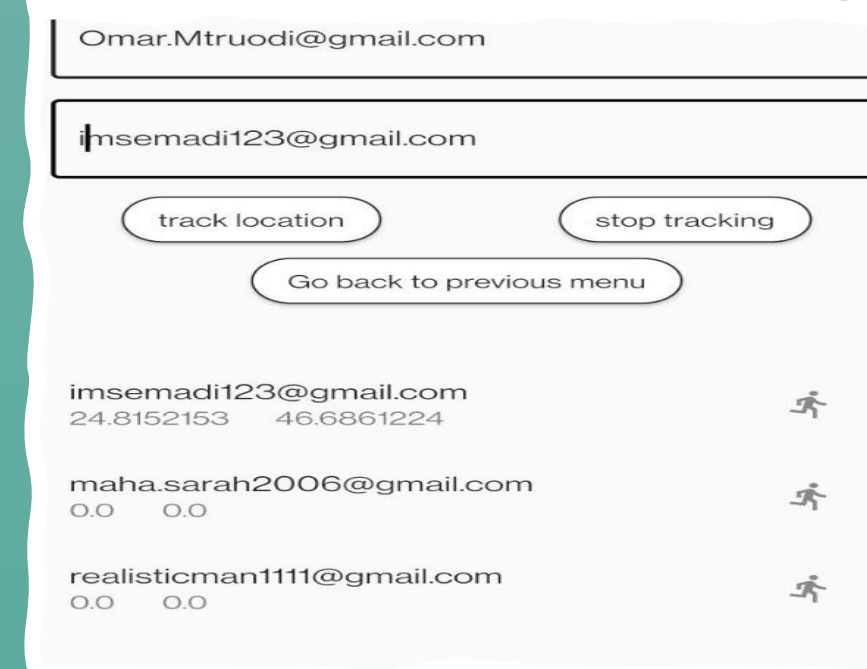
#### Traffic light status detection



#### Text recognition



#### Live location tracking



### Future Direction

### Acknowledgment

This project is highly extendable and there are more features can be added, in the future, like:

- Image captioning.
- sign languages recognition.
- Video captioning.

The beauty of AI can be embedded to help people in their lives.

Thanks to all people who supported the project idea and shared their technical experience, and special thanks to Dr. Yahya Osais who helped in cloud computing decisions, Dr. Muhammad Usman who shared some computer vision models, the chairmen Dr. Aiman El-Maleh, and finally Dr. Mohammed Elarbaa who followed the project process all the time.