

## AUDIOREALITY

ENABLE BLIND PEOPLE TO ENJOY 'SIGHTSEEING' IN THEIR UNIQUE WAY BY PROVIDING THEM WITH LITERARY-PLEASING DESCRIPTIONS OF THEIR SURROUNDINGS.

### TABLE OF CONTENTS

Problem Statement

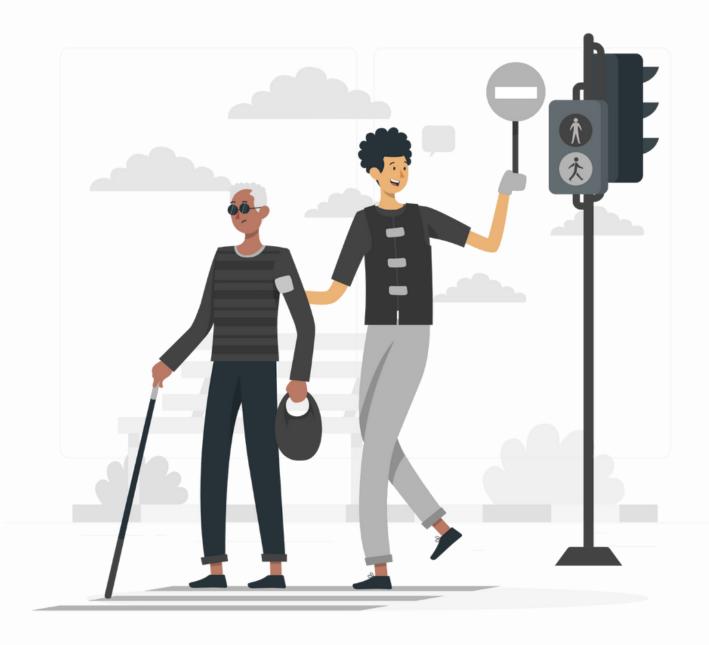
O Demo

AudioReality Overview

What's Next?

Tech Stack

How it works?



#### PROBLEM STATMENT (1)

• How might we, as a community empower, equip and co-create with persons with disabilities to enable them to access, use and *enjoy* places, services, produces and/or information, whether physical or virtual, so that persons with disabilities can connect to and be included in the wider community?

### ENABLING BLIND PEOPLE TO 'SIGHTSEE'

- Currently, most apps that aid blind people occur in very 'practical' ways. E.g. Navigation, safety, etc.
- Blind people should be given the opportunity to enjoy 'sight' in their own unique way.

#### AUDIOREALITY

- App that describes user's current location in a literary-pleasing manner.
- Hoping to make the difficult and mundane task of navigating something more enjoyable for blind people.

### TECH STACK









#### BACKEND:

- 1. Python
- 2. Google's Streetview API
- 3. Clip-interrogator API
- 4. Open Al's latest available GPT API, Davinci

### FRONTEND:

- 1. Flutter
- 2. Flutter's geolocation identifier library

#### HOW DOES AUDIOREALITY WORK?



2. Input location information into Streetview API, to obtain an image of the user's surroundings

Clip interrogator API

4. Lastly, we input these keywords into the GPT API with a query structure that requests GPT to output a literary-pleasing description of the location.

1. Obtain current geolocation of user through Flutter's geolocation library



3. Obtain brief description of image with Clip-interrogator API. This description is used to obtain keywords, such as prominent landmarks, etc.



# DEMO

# BLIND SIGHTSEEING TOUR SERVICES CURRENTLY EXIST IN SOME COUNTRIES

With AudioReality, blind sightseeing tours become a product instead, making it more accessible across different countries and allowing "personal sightseeing tours" to occur in one's day to day commute.

We hope this adds to how the blind in Singapore interact with our city, and hope it increases their fulfillment as they navigate around Singapore.



#### WHAT'S NEXT FOR AUDIO REALITY?

- (1) Conduct optimization on GPT's queries, so erroneous descriptions of locations will be reduced. Also conduct optimization to reduce loading time.
- (2) Create an app that is fully text-to-speech, so blind users can use the app without needing the help of caretakers to navigate its functions.
- (3) Enable profile creation, so users can tailor the output of descriptions to their profile settings. For instance, ask for age, so we can query GPT to give descriptions that consist of less complicated words to children. Alternatively, create options for styles descriptions. For instance, "Victorian era poems" style, etc.
- (4) Create a database of poems. We hope to collaborate with poets in Singapore and ask for copyright access, so we can integrate poems from poems.com.sg into our app. From there, we can programme our app to read poems about specific locations in Singapore if user happens to be close by.
- (5) Automate. Currently, user needs to click "get location" for the app to output a description of the location. We hope to automate this process, so users can simply wear their earphones, walk around Singapore, and have poems / beautiful descriptions played to them as and when something relevant comes into their vicinity.
- (6) Enable photo-taking. Currently, we provide location descriptions with google streetview. This works, but we'd like to improve upon it since google streeview may not necessarily reflect what the location currently looks like. We hope to enable photo-taking, or even video, so users can get the most current description of their surroudings.

# THANK YOU!