What the idea is.

A real-time home mapping app for blind people.

To Recognize objects in the house
Case: If something fell on the ground, they can't find it easily. Also, they may forget the location of their belongings (the keys or example).
A custom image classification model trained with AutoML Vision Edge will identify most of the objects that can be found in a house.

To Recognize people and faces they interact with at home
Case: when a visually impaired person enters a room they don't know who is inside
and they have to wait for the other people to greet and identify themselves which is really frustrating.
A sighted user provides photos to the app and a name for each Object/face to associate ,and a deep learning system will identify faces each they appear again.

Bringing it to life.

Where the project is now.
We are in the Development phase currently and so far we have implemented object recognition in the house, the app maps objects in real time and speaks about them.The model used is for testing purposes as of now.

Sample Code Already Written

- Clone/download this repo
- Open App Directory
- Or alternatively see this link (https://github.com/brianzhou139/HomeNavigation)

Plan and Timeline for Home Navigation.

December 2019:

- Implement object recognition using Auto AutoML Vision Edge
- Create UI/UX prototype.
- Soft releases for Friends and Family.

January 2020:

- Enhance recognition flow performance and accuracy
- Implement Face Identification

February 2020 :

- Finish Android Native User Interface.
- Support Hybrid Version for IOS .

March 2020 :

- Testing and Deployment

April 2020 :

- Soft releases in local communities and adding patches

May 2020 :

- Release at Google IO

How can Google help us.

1.Help us to squeeze every bit of performance for object detection on-device
2.Access to https://cloud.google.com/tpu/ to train models
3.Help us build ML pipeline for model training for person recognition

About Me

My name is Brian Zhou. I'm a passionate android developer.I love code challenges.I recently participated in the IEEMADC Mobile App developement contest and this was my submission(https://ieeemadc.github.io/IEEEmadC-wiki/BookShoot).I have worked on various android projects(https://github.com/brianzhou139).