Adam Homer

ahomer@student.neumont.edu

Abstract

Project proposal for the Seeing Eye App. The Seeing Eye App is an application which provides navigation and personal support for the blind.

Seeing eye

Smartphone Application Proposal

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# Project Success

My application, the Seeing Eye, helps the blind to see. The Seeing Eye provides personal and navigation assistance for anybody who has a vision impairment and can operate a smartphone. The Seeing Eye application is similar to a Seeing Eye dog, but without the hassle of training the dog or using a cane. The Seeing Eye provides three major uses to the visually impaired: first, a user can navigate streets by listening to notifications from the Seeing Eye. The Seeing Eye will notify the user that they are near an intersection by using the smartphone’s built in GPS, camera, and advanced object recognition algorithms; second, the user can save a photo and other details about their friends and family into a friends list. The Seeing Eye draws from this list to notify the user if a friend or family member is in the room, providing the user with the autonomy and freedom he or she deserves; third, the Seeing Eye provides the user with the ability to read currency and price tags by using object character recognition and edge detection. With the Seeing Eye a user can leave his home, walk to the store, go shopping, and make it home safe, completely independent and free.

# Target Users

The Seeing Eye targets users who are blind, or visually impaired, and already use a smartphone as a part of their daily life. Users who have recently lost their vision would find a greater need for this app then a person who has been blind their whole life. The typical user will have a need to navigate the world without sight and does not currently have the skills to navigate the world using a cane, Seeing Eye dog, or echo locator.

# Project Backlog

### Store Person in App

**Priority**: Four

**Description**:

As a blind person I want to be able to store people into a collection.

**Acceptance**:

When a person has been saved the user is notified that the person has been saved.

When a person is saved the user will be able to locate that person in the collection.

### Remove Person from App

**Priority**: Five

**Description**:

As a blind person I want to be able to remove people from the collection.

**Acceptance**:

When a person is removed from the collection the user is notified that the person has been removed.

When a person is removed the user will not be able to locate that person in the collection.

### 

### Change a Person’s Details in App

**Priority**: Six

**Description**:

As a blind person I want to be able to edit a person’s details in the collection.

**Acceptance**:

When a person has been updated the user will be notified that the person’s details have been modified.

### Recognize Strangers

**Priority**: Seven

**Description**:

As a blind person I want to be notified if a stranger is in view of my camera.

**Acceptance**:

When a person who is not included in the collection comes within a certain distance the user will be notified that a stranger is near.

### Recognize People I Know

**Priority**: Eight

**Description**:

As a blind person I want to be notified that my Seeing Eye can see someone that I know.

**Acceptance**:

When a person who is included in the collection comes within a certain distance the user will be notified that the Seeing Eye recognizes someone.

### Reading Price Tags

**Priority**: Nine

**Description**:

As a blind person I want to be able to read price tags.

**Acceptance**:

When a price tag is placed in front of the camera the user will be told the price displayed on the price tag.

### Reading Currency

**Priority**: Ten

**Description**:

As a blind person I want to be able to tell how much money I have.

**Acceptance**:

When currency is placed in front of the camera the user will be told the amount that bill is worth.

# 

# 2-Week Plan

## Week 1

### Notification of Object

**Priority**: One

**Description**:

As a blind person I want to be notified when I am about to walk into an object.

**Acceptance**:

When the camera comes within a certain distance of an object the user is notified

## Week 2

### Notification of Intersections

**Priority**: Two

**Description:**

As a blind person I want to be notified when I am at an intersection.

**Acceptance**:

When the camera comes within a certain distance to an intersection the user is notified that he is close to an intersection.

### Notification of Sidewalk

**Priority**: Three

**Description**:

As a blind person I want to be notified when I am about to walk off the sidewalk.

**Acceptance**:

When the user is about to walk off of the sidewalk the user will be notified.

When the user is walking in a direction that will end with the user walking off the sidewalk the user will be notified.