What problem are you trying to solve?

In the world where all things are connected, not everyone is equally assisted with this growth in technology. Some are left without a means to move about and enjoy their environment. Most times the ones left behind are the visually impaired who cannot get their own visual feedback of their surroundings and grow a strong sense of hearing that does not always prove reliable on local or general streets. With that said these individuals need a means of navigating their day to day lives, whether that be at home, going to the kitchen or on busy streets trying to avoid obstacles that could cost them their lives. Altogether, the scope of those assisted by IoT technology does not encompass most of the visually impaired community where assistance is needed and not just rely on the sole human factor of hearing. They need to be provided with technology to assist them around the environment.

Problem summarised:

1. Blind persons have a hard time **navigating** their environment because they can’t see/
2. Hearing the sounds of what is around is not enough for blind persons to **navigate** freely.
3. The current use of technology is also not enough to help blind persons **navigate.**

I am not sure point 3 is a problem so I highlight it as well as where I got it from.

How do you propose solving it? i.e., Tell us about your idea \*

With the use of IoT, the 285 million visually impaired individuals around the world can be assisted in going about their day to day lives. Our team proposed a software solution that uses speech, text and image processing to visualize the environment and relay this information in speech or haptic feedback to the target audience. It operates by a camera that streams video of the environment process through various algorithms to dictate necessary commands through a microphone which could include but not limited to “Stop, you cannot cross the road as yet”, “Hey, there is a construction site ahead, please turn around” as well as “Hey, Bob is Infront of you”. The image being processed can also be computed with sound input either from the environment or the user giving a command such as “Save Brianna’s face” and will do just that. We will provide the visually impaired with the means of going about their lives safely and with the opportunity of living normally.

Navigation through the environment will be given through commands.

Solution summarized:

1. Allow blind people to “see” and **navigate** by hearing what is around them.
2. Knowing what’s around them will make them **navigate** more effectively.