**CHAPTER 1**

**INTRODUCTION**

*This chapter serves as a background for readers to have an overview of the study even without*

*prior reference to other publications on the topic.*

**I. Project Context**

In this world where people with disabilities are associated as a burden for others and being isolated from the society, a meaningful medium from where they can show everyone that having a disability is not a reason to treat them like the way they are being treated. There are cases in the country where lack of help and welfare for people with disabilities are perceived. There are different kinds of disability that needs to be given so much attention to. Laws in the Philippines support access by persons with disabilities (PWDs) to many of the elements necessary to succeed in life, including employment, education, infrastructure, and rights in court. Although these laws are well-intentioned, the Philippines lack the government budget to create and staff regulatory agencies that make sure they are effectively implemented. (Nika Tumao, 2012) Not enough programs are established, especially for those people who live on the remote areas of the country.

Visual impairment, refers to as any kind of vision loss. It can be a person who cannot see at all, that cannot be corrected by any paraphernalia like glasses or contact lenses. However, it can also be someone who has a partial vision loss, who are advised to use paraphernalia that will help them on their eye problems. Seeing this as a huge problem for one person, can urge someone to do something about it, and perhaps give them a much better solution. There are several reasons for why a person is visually impaired. It can be a result from a terrible accident, illness from which the eyes got affected and probably the disability is in-born. No one knows what horrible things might come, not even in a blink of an eye.

People with vision disabilities, face different problems every day just like any other people, but for them it is much more difficult because not being able to see the things around you is one of the reasons that made it hard. On their daily lives, they face hardships that are probably normal for other people but for them it is very different. Most of them have to depend on others just to go through the day but there are some that tries to depend themselves but still find it so difficult.

As what the proponents have seen about the problems faced by the visually impaired people, they’ve decided to create an application that will help these people cope up to the fast pace changing that is happening to the world. This application is specifically made for the visually impaired people that will enter the vicinity of Pamantasan ng Lungsod ng Maynila (PLM). Providing them a guide while inside the university. It’ll help them depend more on themselves even on facing other people or the things that they will encounter around.

**Eyesee** is expected to give visually impaired people a lot more probabilities to fully depend on themselves while going around the university. To know the different things that is happening around them, and they can also have an idea what the person in front of them looks like. On the way the application will describe what the camera of the phone captured, they will have the knowledge about it. In this way, they can still have the privilege to know what’s happening around them or what are the things that surrounds them even they cannot really see it with their own eyes. Giving them these kinds of way to reach out to the society will probably give them a lot more confidence that they are just as normal as what others is. Providing them some hope with the use of the modern technology that they can still live normally and wonderfully just like everybody else.

**II. Purpose and Description**

Not all people have the chance to see how wonderful the things that surrounds us. The beautiful faces of humans, things that can help us every day and up to the beautiful sceneries around us.

As to give these people, more encouragement on their lives and to depend upon themselves given the capabilities that they have, an application for them to use was established. Specifically pertaining to those people who will enter the vicinity of PLM (Pamantasan ng Lungsod ng Maynila). It can be the students, or other people from outside who have their concerns inside the university. This application will be their guide, letting them wander inside. Whether they need to go to a building, office, classrooms or even on the comfort rooms. Knowing that most of the visually impaired people depend on others, the proponents want them to start depending on themselves by the use of this application. Navigating around and finding things that they are not very familiar of. When talking to a certain person, gives them an idea of what the person looks like. It can be a great attainment for them because often they don’t want other people to be bothered for their own needs.

This application will let them capture anyone or anything right in front of them, and be able to know what is it. Right about their privacy problems, because given that they cannot read on their own, the application will provide a way that will help them distinguish the contents of a certain thing with a text embedded on it. Being able to use it to read letters, books, or even menu on restaurants and stores will be a great convenience to the visually impaired people.

This study is significant to the given people:

To the ***visually-impaired students***, to help and provide a way for them to become more self-reliant whilst inside the university in terms of navigation and awareness.

To the ***programmers and developers,*** this study will encourage them to partake in the improvement and development of applications that can help disabled people and to advance and develop applications and system that utilizes this technology.

Lastly, to the ***future researchers,*** that they will further this study through investing more time in finding out the effectiveness and relevance and to what extent can Computer Vision help in today’s computing technologies.

This study was provided with the challenges that the visually impaired people may encounter inside a university. Using the modern technology, the proponents wanted to give a hand to these people even not personally. Putting efforts to provide something useful is one of the major reasons why this study is made. Giving them more purpose to live and be able to boost their confidence within themselves is so much of a worthy.

**III. Statement of the Problem**

*Based on proponents’ research, they have come up to the following problems:*

1. **Almost all of the reading materials and resources used by a Visually Impaired Person are not available in Braille.**

Scenario:

*A visually impaired student needs a textbook for reading, this needs to be converted to Braille before the person can obtain the information that the textbook has. It may take some time before it can be converted.*

*After a while, the student received a letter from the office but he won’t be able to read it by himself. So the student needs to find someone who can read it and relay the information.*

2. **Difficulty in navigating within the environment.**

Scenario:

*The visually impaired person entered the vicinity of Pamantasan ng Lungsod ng Maynila but then walked alone after passing the gate. While walking, the person is not sure if it is the right path to go.*

*They probably could make a lot of mistakes regarding the spots, rooms, and offices while wandering around the university.*

3. **Visually Impaired People are having a hard time identifying objects and other people around them.**

Scenario:

*The visually impaired person went to the University canteen because of hunger. Right in front of a stall, he stopped but was not sure if it is right one. Then he asked the seller, if they are selling some Sandwich to make sure of it. After the sandwich was done, he was asked for the payment of the food. He looked for the wallet from his bag and after finding the wallet, he took some money out of it but the problem is he is not sure if it’s the right amount for the food he will purchase.*

**IV. Objectives**

1. The objective of this research is to formulate a way to develop and provide the users (Visually Impaired Individuals) an immediate way to know the contents of an object with a text such as letters, lectures and menu information.

2. To provide a guide to the different locations and spots while the user is on the university.

3. To be able to identify and describe the objects, people and environment that can be encountered around.

**V. Scope and Limitations**

This study focused on the problems and difficulties faced by the visually-impaired people while they’re inside the university. It limits the places and spots which can only be found within the vicinity of Pamantasan ng Lungsod ng Maynila.

Specific key points for places inside the university are covered by the study for the guidance in the navigation of the end-user.

The objects with texts on it, that can probably be found inside the university are the things that can be converted into speech once it was captured. Things that can mostly be encountered in the university like letters, lectures, textbooks, bulletin boards and such are the ones that the application can handle for the user.

Different things that can be found inside the university can be identified. Its identification and basically its description such as color and size. The object will be described just by base on its form and appearance. People around can also be identified and analyzed also based from their appearance. A person can be described on what its gender, color of the clothes and the action currently doing.

The things and places outside the Pamantasan ng Lungsod ng Maynila is out of bounds and is not included in this study. Giving directions on how an end-user can reach a particular spot within the university is the only thing the application can provide. Other properties of an object not specified cannot be produce for the object, the same thing goes on if a person is on capture.