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**Research Paper Work Documentation**

**On E-STICK For Visually Impaired**

**This document**

**Personal Draft #3**

**Belongs to Aryan Dwivedi & Abhijay Rajvansh under honourable faculty**

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**[to be updated]**

**Project Title: E-STICK FOR BLIND PEOPLE**

**Name of the organization: \_DO\_**

**Address: \_DO\_**

**Legal Holder of the Project: -**

**Project Location: -**

**Target Group: -**

**Project Budget: -**

[All Basic Information]

**TARGET AREA BACKGROUND & PROBLEMS:**

The idea behind this project was to come up with smart solutions to help the visually impaired lead normal lives, and so we focused the smart stick for blind people on three core areas which are walking, identification and navigation — three areas where visually impaired people struggle the most.

The whole system is composed of a e-stick with voice recognition that are interlinked with a processing unit. All of the e-stick features are accessible through the smart phone device at an initial stage. The user basically chooses what programme they want to use — for example walking — and can access it with their voice command. However, an internet connection must be provided at time for navigation.

“Just like facial recognition, the e-stick can will also be able to identify any objects that comes in the way. This is to give visually impaired people more special awareness of what is happening in their surroundings, and so they can now identify things such as small obstacles” .

Besides allowing us to carry out routine tasks at our respective workplaces, assistive technology also enables people with visual impairments to be more independent at its place. They can get step-by-step walking directions to unfamiliar places, record important information and so much more with special standalone devices designed for people with no or low vision. This devices will be able to inheritate functions like smart watches, motion detectors, temperature check, and many more that help us live independent and healthy lives.

**NEED OF THE PROJECT:**

Technology affects the way **individuals communicate, learn, and think**. It helps society and those who are needy and determines how people interact with outer world and each other on a daily basis. Technology for especially abled people plays an important role in society today. It has positive effects on the world and it impacts daily lives.

“Technology is inevitable in our everyday lives, so why not get developed and live with it.”

Combining software and hardware to enhance someone’s life not only gives satisfaction but develops the thinking ability as well.

**Our Purpose:**

Our purpose is being agents of social change in India through new technologies.

**Our Vision:**

To transform and empower the lives of needy people through this project.

**Our Mission:**

We accomplish our vision by:

1. By making equipped machines of enhanced tech patterns and trying to create a hybrid

a. A community with good levels demonstrates a life transforming encounter during challenges.

b. Technology leads to good and effective judicial, political and social structures in a community.

**OBJECTIVES:**

The said project has the following objective:

* To impart special training on communication skills between blind user with outer world.
* To improve the mobility skills like walking, navigating.
* To give special inputs on managing the daily living skills.
* To tone the other functional senses through special instruction on multi-sensory training.
* To provide for special orientation education with reference to the physical training which will make them to expect more.
* To cope with the normal people levels to prepare and provide opportunities for educational integration that would eventually lead to' social integration.
* To involve the parents and encourage them in a participative role for their abled children so that somewhere they can live a normal life.
* To prepare the blind people for a new & better world.

To provide support services for visually impaired people so that they can travel easily.

**VENUE:**

* [ to be updated ]

**DURATION:**

* [ to be calculated ]

**BENEFICIARIES:**

* This project will benefit lakhs of visually impaired person across the country by providing resource-full medium as per their need of their day-to-day life.

**METHODOLOGY:**

**The hardware orientation of this project comprises of the following components:-**

After collecting several data from different resources, and preparing basic structure :

# For the basic structure

# Raspberry Pi 4 Model B with 8GB Ram (Latest & Original)

* Following specifications:

 Model-Raspberry Pi 4 Model-B

 Processor- Broadcom BCM2711, quad-core Cortex-A72 (ARM v8) 64-bit SoC @ 1.5GHz

 RAM Memory - 4 GB LPDDR4 SDRAM

* Initialising the hardware component HC-SR04. So that while walking it can sense the obstacles in the way