Customer Requirements

**SAG ML**

**ـــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــ**

**Table of Contents**

[Document Status:](#_m6pu9si33bej) ……………………………………………………………….1

[Document History:](#_edfh8stv33cy) ……………………………………………………………...1

[Project Description:](#_jhjnw0jh1mna) …………………………………………………………….2

R[equirements Mapping:](#_odtemgqdvxw).............................. …………………………………...3

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| 1.0 | Aya Ibrahim | [9-9-2022] | Initial Creation |
| 1.1 | Aya Ibrahim | [23-9-2022] | Definition, features, key elements, mapping |
| 1.2 | Alaa Eid | [22-10-2022] | Edit 6th key element and it’s requirement mapping |

Project Description:

Definition:

The project aims to help the blind using computer vision to help them identify different things around them and NLP to interact with the user using voice commands.

The project simulates the natural vision of humans using AI techniques enabling the blind to function more normally and independently.

Features:

* Object detection
* Face recognition
* Activity recognition
* Text recognition
* Speech recognition

Key Elements:

1. Identify objects around the user.
2. determine the distance between objects and the person
3. Describing the different activities and actions around the user
4. Recognizing text including handwritten on different objects (book, paper, sign, …)
5. Recognizing people determined by user
6. Speech recognition to activate various features via voice commands and the smart assistant
7. Voice authentication

Requirements Mapping:

|  |  |  |  |
| --- | --- | --- | --- |
| **Req\_ID** | PO\_SAG\_CR\_ML\_001-V1.1 | **Covers** | Identify objects around the user. |
| **Req\_ID** | PO\_SAG\_CR\_ML\_002-V1.0 | **Covers** | determines the distance between objects and the person |
| **Req\_ID** | PO\_SAG\_CR\_ML\_003-V1.1 | **Covers** | Describing the different activities and actions around the user |
| **Req\_ID** | PO\_SAG\_CR\_ML\_004-V1.1 | **Covers** | Recognizing text including handwritten on different objects (book, paper, sign, …) |
| **Req\_ID** | PO\_SAG\_CR\_ML\_005-V1.1 | **Covers** | Recognizing people determined by user |
| **Req\_ID** | PO\_SAG\_CR\_ML\_006-V1.2 | **Covers** | Speech recognition to activate various features via voice commands and smart assistant |
| **Req\_ID** | PO\_SAG\_CR\_ML\_007-V1.0 | **Covers** | Voice authentication |