Software Requirements Specification

For

Cab Safety using Emotion Detection

Group no:2

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Project Guide:

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1. Introduction

1.1 Purpose

The purpose of this project is to make cabs safe. These are the ones which are booked online for example Ola cabs, Uber cabs and etc.

1.2 Intended Audience and Reading Suggestions

The document is intended for developers, and Project Guide.

1.3 Product Scope

This Product aims in making cabs safer by placing a device with camera and with other features. This product makes sure that there is no delay to reach the victims because real time actions are taken.

2. Overall Description

2.1 Product Perspective

The new project has a device which uses emotion detection technique to detect emotion primarily fear and anger and sends its instances (pictures) to the nearest help centers like police station.
It has GPS and GSM module that will help in locating the car and also contact the same.
The captured images are sent to an android application which is with all the help centers and then necessary actions are taken.

2.2 Product Functions

Device features:
- Detects emotion (fear, anger)
- Captures images, real time location
- Calculates the shortest path to help center
- Sends pictures and real time location(loop)

Android features:
- Pop up notification with images
- Entering into the application and verifying the images
- The application also shows the real time location
- If danger identified call is connected to the device (not the owner) and recorded
- Else discarded

Database Features:
- Details of each device is recorded.
- Details of each trigger from device is recorded

2.3 Operating Environment

The device will be fixed in the cab powered 24x7.

2.4 Technologies used

Programming language:
* Python
* Java
* Kotlin

Software:
* Python IDLE
* Android studio

Hardware:
* Raspberry Pi 3
* GPS/GSM Hat module
* Sim card
* Camera module
* Speaker
* Microphone
* Solar Panel and battery

Database:
* Firebase