**AUTONOMOUSROBO-CAR**

**Problem Definition**

Developing an autonomous robo-car which can navigate through real time obstacles

**Aims & Objectives**

This project aims at creating an autonomous robot car which can navigate and avoid real time obstacles. The basic aim is to attach a camera to a laptop or to any smart device which will be placed on a servo motor car. The device will be programmed through MATLAB/OPEN CV in such a way that it will be able to process the images and estimate the directions to travel on its own. The project specifically aims at the following aspects:

* Designing an autonomous robo-car that can work on its own.
* Making the car navigate through real time obstacles.

**Benefits**

* + - An autonomous robo-car that can handle its own movement.
    - It will further open avenues for creating a smart car in the future.
    - It will reduce work load and mental pressure of drivers.

**Proposed Plan of work**

* We are using incremental model of Software Engineering.
* With the help of experts from mechanical department, a platform will be made to mount the laptop and external camera.

**Methodology**

The following methods will be implemented :

* We will take help from mechanical department to fabricate robot car .
* We will study existing image processing algorithms for navigation and will try to implement in MATLAB/OPENCV.
* We will test our robo-car in real time situations .

**Technology**

* Open Computer Vision(OPENCV)/MATLAB
* JAVA

**Deliverables**

* An autonomous robo-car would be developed which will be able to process images and decide the path.
* Ability to avoid obstacles and go in a safe direction. Navigation through real time traffic with low density would be possible.

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