AUTOMATIC CAR SYSTEM

ABSTRACT:

The main aim of the automatic car system is to create cars that can drive themselves without any need of a human driver. We use special sensors, computer software, and gps trackers to help the cars see the road and make safe decisions. Our goal is to provide safe transportation for everyone.

INTRODUCTION:

An automatic car system referred as a self driving car which does not require a driver to specially perform the operations on car such as open the door, to start the engine, operations over gear, clutch, break and finally to reach the destination without any involvement of humans.

REQUIRMENTS:

There are some main components that enable self driving:

- Sensors and software. Sensors, including cameras, Light Detection and Ranging (LiDAR), and radar are used together to help vehicles see road conditions at various distances, and in different weather and lighting conditions machine learning and mapping software provide the tools to improve the operations and decision making of vehicle.

PROCESSES INVOLVED IN DRIVERLESS CAR DRIVING:

- The driver sets a destination. The car's software calculates a route.

- A sensor monitors a car and creates a map of the car's current position.
- A sensor on the wheels operates sideway movement to detect the car's position relative to the map.
- Radar systems in the is used to calculate distances.
- AI software in the car is connected to all the sensors and collects input from the maps and video cameras inside the car.
- The AI performs decision-making processes and controls actions in driver control systems, such as steering and brakes.
- The car's software depends on Maps for the things like landmarks, traffic signs and lights.

PROBLEM STATEMENTS:

- How will the self driving cars maintain the speed in night time which is mentioned on the road side boards?
- How will the self driving car’s overtake the another vehicle?
- What will self driving car do if the thick layer of snow get stuck on front glass?
- What will the self driving car do if the gps mapping is not working?
- How it will manage traffic sign’s and navigation sign’s while driving?
- What if the user want to stop the any nearest place before going to destination then what will the self driving car do?
- What if the security alarm repairs and suddenly someone has break the window while you are very far at distance how the self driving car will manage it and let you know about it?