Smart vision team

Self-driving car

Ai project - FCIS

INTRODUCTION

Each new generation of cars is equipped with more automated features and crash avoidance technology. Indeed, many of today's high-end cars and some mid-priced ones already have options, such as blind-spot monitoring, forward-collision warnings, and lane-departure warnings. These will be the components of tomorrow's fully self-driving vehicles oreIpsum dolor sit

THE PROBLEM

Since most car crashes are caused by human error, in theory, taking control of the moving vehicle away from the driver is expected to drastically reduce highway fatalities. As well as the traffic congestion caused by cars, thus increasing fuel consumption and increasing cost. traffic collisions (and resulting deaths and injuries and costs) caused by human error, such as delayed reaction time, tailgating, rubbernecking, and other forms of distracted or aggressive driving should be substantially reduced

OBJECTIVES

The main goal of the self-driving vehicle is to safely get passengers to their destination. Self-driving vehicles will be able to reduce the chances of you hitting something and from something hitting you. What's more, self-driving vehicles are a suitable solution for people with disabilities that need to travel alone. Sensors, cameras, and extremely fast analysis are required to do this. We want to learn about how these are used to create a vehicle that can successfully navigate without collision.

METHODS

The rapid development of the Internet economy and Artificial Intelligence (AI) has promoted the progress of self-driving cars. Deep learning has been demonstrated to be an excellent technique in the field of AI. Deep learning methods have been used to solve various problems like image processing, speech recognition, and natural language processing.

Our objective is to train a 3D model by using deep learning and computer vision, to build a highly automated vehicle, and for this purpose the steps we will be following are these. To achieve our goal we will be using Open CV for detecting lane lines deep learning and neural network

concepts to build self-driving cars. We will be using algorithms like BFS and DFS. Then behavioral cloning to test and simulate fully functional self-driving cars.

HYPOTHESIS

There are two elements to this problem. One is to model the motion of the tracked automobiles using measurements to improve your estimate of each automobile's location and velocity. The second is to systematically assign measurements to different tracks. A track should represent a single car, but the radar is just returning measurements on echoes, it doesn't know anything about the source of the echoes.

RESULTS

- Greater Road Safety - Automation can help reduce the number of crashes on our roads.
- Greater Independence - People with disabilities, like the blind, are capable of self-sufficiency, and highly automated vehicles can help them live the life they want.
- Saving Money - It can help avoid the costs of crashes, including medical bills, lost work time, and vehicle repair

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Team members

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