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Analyzing the Future of Autonomous Vehicle Using Machine Learning

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Abstract

Background: Autonomous vehicles also commonly known as driverless or self-driving vehicles, are automobiles that require no human involvement for operating or controlling them. In recent years, advancement in automated vehicle [1] concepts have progressed but still some human input is required, depending upon the level of automation [2]. The development of self-driving cars is one of the most trendy and popular directions in the world of AI and machine learning [3].

Objectives: The objective of this research work is to find out how Machine Learning algorithms are used to identify objects, interpret situations, and make decisions based on object detection and object classification algorithm.

Methodology: The methodology used in this consists of the role of machine learning and prediction of the future scenario of the Autonomous Vehicle. Thanks to ML, these autonomous cars are very much capable of sensing the environment around them and moving safely, requiring very little or no human intervention whatsoever.

Result and Discussion: Autonomous Driving System research is gaining importance in recent decades, disrupting the automotive industry in a big way. Based on the road statistics data, it has been concluded that approximately 94% of road accidents are because of the driver-related faults, including inappropriate maneuvers and distracted drivers [4]. In order to assess the prospects for the development of AVs in the assessment of their potential users, we conducted our own research in the group of randomly selected people to find out whether they are interested in Autonomous Vehicles or not. We found out that majority section of the people are very much interested in it.

Conclusions and Future Work: Our future work will be focused on the development of a much accurate machine learning algorithm to find the solutions to various challenges arising in self-driving cars. Overall, self-driving cars are a big plus for society. Less pollution, less traffic, more efficiency, and safer driving can all be expected when cars become self-driving. The technology is trending in the right direction and will hopefully bring in a bright, autonomous future.

References

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