Curve Path Prediction and Vehicle Detection in Lane Roads using Deep Learning for Autonomous Vehicles

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Abstract: *The development of autonomous vehicles has seen significant progress in recent years. One of the key challenges in this field is the ability of the vehicle to accurately predict the path of the road and detect other vehicles in real-time. In this research paper, we propose a deep learning-based approach for curve path prediction and vehicle detection in lane roads for autonomous vehicles. The proposed approach utilizes convolutional neural networks to detect vehicles and predict their trajectory, taking into account road geometry and traffic conditions. The model will be trained on a large dataset of road scenes and tested in realistic simulations. The findings of this study will contribute to the advancement of autonomous vehicle technology, particularly in terms of improving the accuracy and reliability of curve path prediction and vehicle detection in lane roads.*

Keywords: CNN Algorithm, Lane detection, Autonomous Vehicle, Curve Path Prediction, Deep Learning

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