Autonomous Lane Detection Car using Raspberry PI and Open CV

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Abstract: *This research paper introduces an innovative method for real-time autonomous lane detection utilizing a Raspberry Pi embedded system and the OpenCV computer vision library. The primary objective is to improve vehicle navigation capabilities by precisely identifying lane boundaries from input video streams. The system's robust performance across diverse environmental conditions is achieved through the computational power of the Raspberry Pi platform and the flexibility of OpenCV. The methodology encompasses image preprocessing, lane detection algorithms, and seamless integration with the Raspberry Pi hardware. Through comprehensive experimental results, the proposed approach showcases its effectiveness and efficiency in autonomously detecting lanes. This research contributes to the development of safer and more reliable autonomous driving systems.*

Keywords: autonomous lane detection

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