



iGP: Autonomous Car

iGP Module: Real Time Lane Detection for ADAS: A Computer Vision Based Approach

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Advanced driver assistance systems (ADAS) are systems developed to improve traffic safety by assisting car drivers and to reduce the number of road accidents. ADAS relies on the available sensors (e.g. GPS and Cameras) to improve driving comfort and safety by automatically recognizing and reacting to potentially dangerous traffic situations. Also, driver behavior can be monitored to detect drowsiness and hence decrease the risk of distracted driver.

With the increase in the number of vehicles, many intelligent systems have been developed to help drivers to drive safely. Lane detection is a vital element of driver assistance systems. Lane detection process has several major challenges, such as attaining robustness to inconsistencies in lighting and background clutter. To address these issues in this project, several image processing and computer vision algorithms will be implemented. The developed algorithm will be implemented on a DSP KIT to guarantee real time performance.