Leveraging Threshold-Based Image Processing for Autonomous Vehicle Safety

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Abstract*: In the last two decades, most automobile companies have focused on developing driverless/automatic driving vehicles. A major challenge for these vehicles is detecting objects and other vehicles on the road. Image processing is one solution to address this problem. In this paper, the input images are obtained from an overhead-mounted camera. The noise in the input images is then removed, and the required information is extracted. We used SCILAB for image processing, along with a microcontroller interfaced with it for real-time processing and actuation of commands.*

Keywords: Automated Vehicle, Pre-Processing, Threshold, Bi-level Threshold Algorithm