Abstract

On road vehicle detection is an essential part of the Intelligent Vehicles and it is an important problem in the area of intelligent transportation systems, driven assistance systems and self-guided vehicles. The proposed algorithms should detect out all cars in realtime. Related to the driving direction, the cars can be classified into two types. Cars drive in the same direction
as the intelligent vehicle and cars drive on the opposite direction of the intelligent vehicle. Due to the distinct features of these two types, we can use a fast approach so-called association is a modified version of the association approach [1] to detect both these directions. The proposed method is achieved in two main steps. The first one detects all obstacles from images. The second step is applied to each obstacle to verify if it is a vehicle or not by the mean of AdaBoost classifier. The modified Association approach has been applied to different images data and the results are satisfactory.

Reference

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Index Terms

Computer Science

Artificial Intelligence

Key words

Association

intelligent vehicle

vehicle detection

Optical Flow

AdaBoost

Haar filter

Temporal matching