St Mother Theresa Engineering College , Vagaikulam

Department of Computer Science and Engineering

IBM NALAIYA THIRAN

LITERATURE SURVEY

TITLE : Intelligent Vehicle Damage Assessment and Cost Estimator for Insurance Companies

DOMAIN NAME : Artificial Intelligence

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ABSTRACT : A system and method are provided for automatically estimating a repair cost for a vehicle. A method includes receiving at a server computing device over an electronic network one or more images of a damaged vehicle from a client computing device performing image processing operations on each of the one or more images to detect external damage to a first set of parts of the vehicle inferring internal damage to a second set of parts of the vehicle based on the detected external damage and calculating an estimated repair cost for the vehicle based on the detected external damage and inferred internal damage based on accessing a parts database that includes repair and labour costs for each part in the first and second sets of parts

INTRODUCTION :

In today's world, Vehicles are increasing heavily. Because of increasing the vehicles, accidents are very common because the peoples are driving a car very

fast on the road. The people claim the money for repair the car through vehicle insurance when the accident happens. Because of incorrect claims, the company behaves badly and doesn't make payments currently. This happens due to claims leakage, the claims leakage refers to the difference between the amounts secured by the company to the amount that company should have secured based on the claims. Still the damage to the car is examined clearly and it will take more time to claim the process according to the company policy.

Although the company does one's best to speed up the claiming process delay. Differentiate the proposed system that is maybe speed up the car damage that can be check in process. Just by sending the image containing a damaged car and can system perform car damage detection in a minute rather than hours if it is inspected visually. The system can utilize machine learning approach as well as computer vision to decide the damage analysis, location of the damage as well as severity of the damage.

LITEREATURE SURVEY :

In this literature survey several methods have been proposed for detection of car damage. Analysis of the damaged vehicle that can be automatically claiming insurance that takes human resource, time and effort. Image processing and machine learning techniques are analysing the vehicle damage in the proposed solution. In Advanced solution helps to speed up the claiming process sufficiently. Consider a situation, if a person is driving a car they met an accident the vehicle owner can taken a few photos of the damaged car from a mobile phone that can be send to the insurance company and can just upload the photos to the system. The system can analyse the damage, severity of the damage as well as location of the damage. In this proposed project the insurance company can machine-driven the car damage analysis process without the need for humans to analyse the damage done to the car. Therefore, it is a very challenging task for quality of computer vision techniques and also Machine learning technologies. The fully-automatic detection and recognition of minor vehicle body damages in a scenario of frequently changing drivers, such as in the car rental or car sharing businesses. It utilizes a sensor network integrated into the vehicle body. The algorithmically contribution is the multi sensor-data fusion of the signals from these sensors and the subsequent reasoning framework stage. The sense of Artificial Intelligence (AI) based on machine learning and deep learning algorithms can help to solve these kinds of problem for insurance industries. Initially, they discover the effect of domain-specific pre-trained CNN models, which are trained on an

ImageNet dataset, and followed by fine-tuning, because some of the categories can be fine granular to get their specific tasks. Automated photos can be very useful in auto accident detection, as it can greatly reduce the cost of processing insurance claims. An ideal scenario is where the auto user can upload a few photos of the damaged car taken from a mobile phone and perform the damage assessment and insurance claim automated actions.

The Author [1] ,the proposed system designed by using YOLO(you only look once) algorithm to detect tha car damage, Here the multi sensor data fusion technique is allows to locate the portion of damage more accurately and performs detection faster compared to other algorithms which is fully automatic and doesn't require much human intervention. And author [2], the proposed system uses deep learning based algorithm are VGG16 and VGG19 damaged car detection in the real world. This algorithm notice the severity of the damaged car based on the location. Finally the author concludes that L2 regularization work greater. Author [3], the proposed system uses vehicle damage detection technique depends on transfer learning and mask RCNN, The mask regional convolution neural network determines a damaged car by its position and estimate the depth of the damage and author [4], the proposed system uses convolution neural network is use to accept that image contains a car damage or not. It take as great opportunities to attempt by classifying the car damage into different classes.

REFERENCES :

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