V.S.B.ENGINEERING COLLEGE, KARUR

Department of Computer Science and Engineering

IBM NALAIYA THIRAN

LITERATURE SUYVEY

TITLE : INTELLIGENT VEHICLE DAMAGE ASSESSMENT AND COST ESTIMATOR FOR INSURANCE COMPANIES

DOMAIN NAME : BANKING AND BUSINESS

LEADER NAME : P.NAVEEN

TEAM MEMBER'S : PRAKASH J, PRAVEENKUMAR K, NIVESAN A.

MENTOR NAME : Mr. T.MANIKANDAN
ASST PROFESSOR
DEPARTMENT OF CSE

ABSTRACT :

Nowadays, a lot of money is being wasted in the car insurance business due to leakage claims. Claims leakage Underwriting leakage is characterized as the discrepancy between the actual payment of claims made and the sum that should have been paid if all of the industry's leading practices were applied. Visual examination and testing have been used to may these results. However, they impose delays in the processing of claims. The aim of this project is to build VGG16 model that can detect the area of damage on a car. The rationale for such a model is that it can be used by insurance companies for faster processing of claims if users can upload pics and the model can assess damage (be it dent scratch from and estimates the cost of damage. This model can also be used by lenders if they are underwriting a car loan, especially for a used car.

INTRODUCTION :

In today's world, it can observed that the number of vehicles we use is quickly expanding; let's agree that there isn't a single street without a car. As a result, an increase in the number of automobiles on the road may lead to an increase in the percentage of accidents occurring nearby; additionally, the number of accidents occurring nearby would be significant; the accidents would not be particularly serious, but the automobile would be damaged, prompting people to file insurance claims. The whole idea focuses on this question: how can a customer claim insurance more quickly? To keep the procedure quiet, a machine learning model is developed that utilizes image processing to categorize the photographs and calculate the percentage of damage to the car. The user will be able to get payment based on the model's outcomes. Because the ML model would be exclusively responsible for this procedure, it would be faster than the manual approach. Analyze the damage in a fraction of the time it takes people and with minimal human interaction

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 thE 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 :

[1]. S. Gontscharov, H Baumgartel, A.Kneifel, and K.-L. Krieger, Algorithm development for minor damage identification in vehicle bodies using adaptive sensor data processing," Procedia Technology, vol. 15, pp. 586 {594, 2014. 2nd International Conference on System-Integrated Intelligence: Challenges for Product and Production Engineering.

[2]. Phyu Mar Kyu ,car damage detection and classification, faculty of information technology king Mongkut's institute of technology ladkrabang Bangkok,Thailand 62606003@kmitl.ac.in.

[3]. Girish N, Mohammed Aqeel Arshad, car damage detection using machine learning. International journal of advances research in computer and communication engineering,vol. 10, issue 8, August 2021 DOI 10.17148/IJARCCE.2021.10808.

[4]. A.Neela Madheswari, J.haripriya, G.Kiruthika, R.M.Meyammai Mahendra Engineering college, India,exterior vehicular damage detection using deep learning, department of computer science and engineering.