INTELLIGENT VEHICLE DAMAGE ASSESSMENT AND COST ESTIMATION FOR INSURANCE COMPANY

DOMAIN **:** Artificial intelligence

TEAM ID **:** PNT2022TMID48764

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PAPER 1: Damage Assessment of a vehicle and Insurance Reclaim.

PUBLISHED YEAR: April 2022

AUTHOR: Vaibhav Agarwal, Utsav Khandelwal, Shivam Kumar, Raja Kumar, Shilpa M

By reducing loss adjustment costs, improvements in the First Notice of Loss and the speed with which claims are examined and evaluated might save a lot of money in the automobile insurance claims process. Car damage is automatically identified and classified using advanced picture analysis and pattern recognition technology. A technique that compares before-and-after-accident car images to automatically detect the damaged location.

KEYWORDS: Convolution Neural Network, Deep Learning, Image classification, R-CNN and object detection.

PAPER 2: Research on Intelligent Vehicle Damage Assessment System Based on Computer Vision.

PUBLISHED YEAR: 2020

AUTHOR: Zhu Qianqian, Guo Weiming, Shen Ying, Zhao Zihao.

At present, under the guidance of the new generation of information technology, the rapid accumulation of data, the continuous improvement of computing power, the continuous optimization of algorithm models, and the rapid rise of multi-scene applications have made profound changes in the development environment of artificial intelligence. In this paper, based on the demand of automobile insurance claims and intelligent transportation, combined with abundant basic data and advanced machine vision algorithm, an intelligent damage determination system of 'Artificial Intelligence + Vehicle Insurance' is constructed. This paper first introduces the functions of the intelligent damage assessment system. Secondly, it di success the realization path of each functional module in detail, and finally puts forward the vision for the future.

KEYWORD: Convolution Neural Network, Deep Learning, Image classification, R-CNN and object detection.

PAPER 3: Literature survey for autonomous vehicles: sensor fusion, computer vision, system identification and fault tolerance.

PUBLISHED YEAR: 2018

AUTHOR: Amr Mohamed, Jing Ren, Moustafa El-Gindy, Haoxiang Lang and A.N. Ouda

Autonomous vehicle technologies are receiving great attention with increasing demands for autonomy for both civilian and military purposes. In previous work (Mohamed et al., 2016), the recent developments in autonomous vehicles in the fields of advanced control, perception and motion planning techniques is surveyed. In this paper, the state of research w.r.t. autonomous vehicles from different perspectives will be described. The capability to integrate data and knowledge from different sensors are essential. In addition, advanced perception techniques and the capability to locate obstacles and targets are necessary to properly operate autonomous systems. Moreover, achieve reliable levels of performance by determining the faults and enabling the system to operate with these faults in mind. Fault tolerance is required to analysing the measured input/output signals of the system. This paper will briefly survey the recent developments in the field of autonomous vehicles from the perspectives of sensor fusion, computer vision, system identification and fault tolerance.