

LITERATURE SURVEY

YEAR	TITLE	AUTHOR	TECHNOLOGY USED	IDEA
2021	Modelling and Application of Neural Networks for Automotive Damage Appraisals	David Josephs, John Santerre, Fred Poon and Yang Zhang	EMS Model, Object Detection and Mask Identification using Mask R-CNN and Image Classification using VGG16	In this integrated workflow, we focus on processing the database of car images into labels that can represent the car damages from multiple levels and converting them to labels that can be easily digested together with other EMS features for appraisal value prediction. Despite the challenges we confronted with car images of varies quality, we built an image multi-classification model with CNN to classify car damage severity.
2020	Automatic Car Insurance using Image Analysis	Aniket Gupta, Jitesh Chogale, Shashank Shrivastav and Prof. Rupali Nikhare	Deep Learning	Image analysis methods extract information from an image by using semi-automatic or automatic techniques termed: image understanding, image description, scene analysis, pattern recognition, computer/machine vision etc). Image analysis is different from the various other types of image processing methods, such as the restoration or enhancement in that the end result of image analysis procedures is a numerical output rather than an image or some pictorial output.

2019	Deep Learning Based Car Damage Classification and Detection	Mahavir Dwivedi, Satya Samal and Omkar S N	Deep Learning, Car damage classification/detection, Pre-trained CNN models, YOLO object detector and VGG19	We demonstrate a mechanism to classify/detect damage in vehicles. For this, we manually collected versatile dataset from the internet through running web crawler on various search engines like google and bing, and used deep learning models for the damage classification task. Combining transfer learning with cyclic learning rates for training neural networks we were able to outperform the current state-of-the-art in vehicle damage classification by a significant margin. We are also successful in detecting the damaged part of the vehicle using YOLO framework.
2020	Research on Intelligent Vehicle Damage Assessment System Based on Computer Vision	Zhu Qianqian, Guo Weiming, Shen Ying and Zhao Zihao	Deep Learning Frameworks, AI Algorithms,	<p>Accident investigation: Photographs of target vehicles and multiple trio vehicles were taken and uploaded, intelligent recognition, information input, intelligent recognition and event finalization are completed in accident investigation.</p> <p>Intelligent image damage assessment: image damage assessment is achieved by intelligent component recognition and intelligent damage recognition.</p>