II. LITERATURE SURVEY

In this literature survey several methods have been proposed for detection of car damage. Srimal et al. [4] proposed a solution which uses 3D Computer Aided Design for the discernment of car damage from the picture, the system only detect damage at edge portion only. Detection of the car damage through CAD software requires some knowledge about the software. S Gontscharov et al [5] ,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. Phyu Mar Kyu et al [3], 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. Girish N et al [2], 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. A Neela Madheswari et al [1], 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.

III. PROPOSED METHODOLOGY

Detect the car damage using photo taken at the accident scene is very useful to reduce the cost of processing insurance claims, as well as provide greater convenience for vehicle users. The following methods are used in the proposed system.

1. Dataset Explanation.

2. Describing the level of damage.

3. CNN Model.

4. VGG16 Algorithm.

DATASET EXPLANATION

Data preparation is very costly depending on the demand of marking the data.VGG16 can be used to need as a true image in an input. Cross-validation is an approximate for our models to takes a more time since, it is very costly to train the VGG16 for many years. Consequently split the dataset arbitrarily into distinct set for training and validation. Car is to train for multiple times. At the end train and test can be split for similar images. In this dataset we use more different types of car images. Report our three collected datasets are following.

- Image Net dataset - Vehicle

- Dataset - All the three dataset are contained train and validation of damaged and undamaged cars. Describing the Level of Damage Damaged car can be defined by their incidence. We think about each damaged part into small, average, severe. The categorization of the damaged car levels as follows.

- Small Damage - creaks in headlight.

- Average Damage - Damage in car doors.

DESCRIBING THE LEVEL OF DAMAGE

Damaged car can be defined by their incidence. We think about each damaged part into small, average, severe. The categorization of the damaged car levels as follows.

- Small Damage - creaks in headlight.
- Average Damage - Damage in car doors.
- Severe Damage - damage of air bags.

EXPERIMENTAL RESULTS

First we have to train the image contains a car. The data contains three classes namely train, test and validation. Trained image is compare with the test image. Car as to be trained for many times by using epochs which means how many times the algorithm can work between the whole training dataset. In this graph they can taken only two times of running the algorithm. Finally the comparison is completed lastly print the graph containing accuracy, validation accuracy, loss and validation loss

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