VISVESVARAYA TECHNOLOGICAL UNIVERSITY,

BELAGAVI - 590018

A PROJECT REPORT ON

"ANTI-FRAUD SYSTEM FOR CAR INSURANCE CLAIM BASED ON VISUAL EVIDENCE"

Submitted in partial fulfillment of the award of Degree of

BACHELOR OF ENGINEERING
in
COMPUTER SCIENCE AND ENGINEERING

By

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CERTIFICATE

This is to certify that the Project work entitled "**ANTI-FRAUD SYSTEM FOR CAR INSURANCE CLAIM BASED ON VISUAL EVIDENCE**" has been successfully completed by

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The bonafide students **of Department of Computer Science and Engineering, Alva's Institute of Engineering and Technology** in partial fulfilment of the requirements for the award of **BACHELOR OF ENGINEERING** in **DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELGAUM** during the year **2019-2020**. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the library. The project report has been approved as it satisfies the academic requirements in respect of project work prescribed for the said Degree.

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ABSTRACT

Automatically scene understanding using machine learning algorithms has been widely applied to different industries to reduce the cost of manual labor. Nowadays, insurance companies launch express vehicle insurance claims and settlements by allowing customers uploading pictures taken by mobile devices. This kind of insurance claim is treated as a small claim and can be processed either manually or automatically in a quick fashion. However, due to the increasing number of claims every day, systems or people are likely to be fooled by repeated claims for identical cases leading to big losses to insurance companies. Thus, an anti fraud checking before processing the claim is necessary. We create the first data set of car damage images collected from the internet and local parking lots. In addition, we proposed an approach to generate robust deep features by locating the damages accurately and efficiently in the images. The state-of-the-art real-time object detector YOLO is modified to train and discover damage regions as an important part of the pipeline. Both local and global deep features are extracted using the VGG model, which are fused later for more robust system performance. Experiments show our approach is effective in preventing fraud claims as well as meet the requirement to speed up the insurance claim prepossessing.