

Title: Optimizing Vehicle Insurance Processing through Advanced Deep Learning Models

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Abstract: This paper presents a novel method for predicting insurance claims by utilizing artificial intelligence, specifically a deep learning model within the Convolutional Neural Network (CNN) framework. The purpose is to automate and simplify the insurance claims process. The model utilizes computer vision technology to precisely detect and identify car damage, resulting in a substantial reduction in the processing time for insurance claims. The article describes the creation of a specialized dataset consisting of actual photographs of vehicles that have been wrecked. It also assesses multiple deep learning models, ultimately finding that InceptionV3 is the most successful, achieving an accuracy rate of 97%. The suggested AI system seeks to improve the efficiency of claims processing and decrease the need for human evaluation. This would provide a more dependable and efficient method for handling automobile insurance claims after accidents.

Keywords: Vehicle damage detection , Deep learning , InceptionV3 , Architecture of InceptionV3 , AI based insurance system

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