LITERATURE PROJECT ON INTELLIGENT VEHICLE DAMAGE ASSESMENT AND COST ESTIMATOR FOR INSURANCE COMPANY

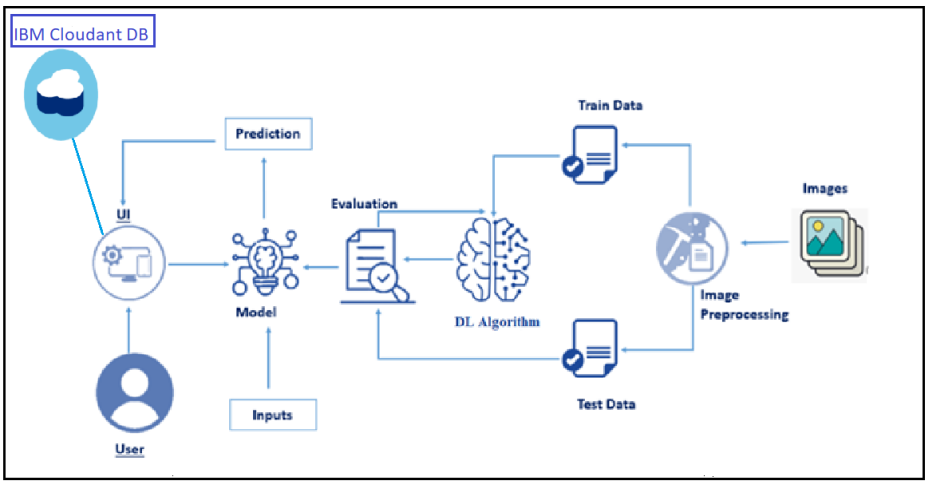
IDEATION PHASE

PROJECT DESCRIPTION

Nowadays, a lot of money is being wasted in the car insurance business due to leakage claims. Claims leakage Underwriting leakage is characterized as the discrepancy between the actual payment of claims made and the sum that should have been paid if all of the industry's leading practices were applied. Visual examination and testing have been used to may these results. However, they impose delays in the processing of claims.

The aim of this project is to build a VGG16 model that can detect the area of damage on a car. The rationale for such a model is that it can be used by insurance companies for faster processing of claims if users can upload pics and the model can assess damage(be it dent scratch from and estimates the cost of damage. This model can also be used by lenders if they are underwriting a car loan, especially for a used car.

Technical Intelligence:



Digital transformation in the car insurance field:

General Overview

Car insurers need to perform many daily operations, including validation, inspection, data processing, management, and storing of huge volumes of data generated by different parties. Moreover, the variety of cars increases as well as the number of insurance claims, and car rental services have to adjust their calculations accordingly.

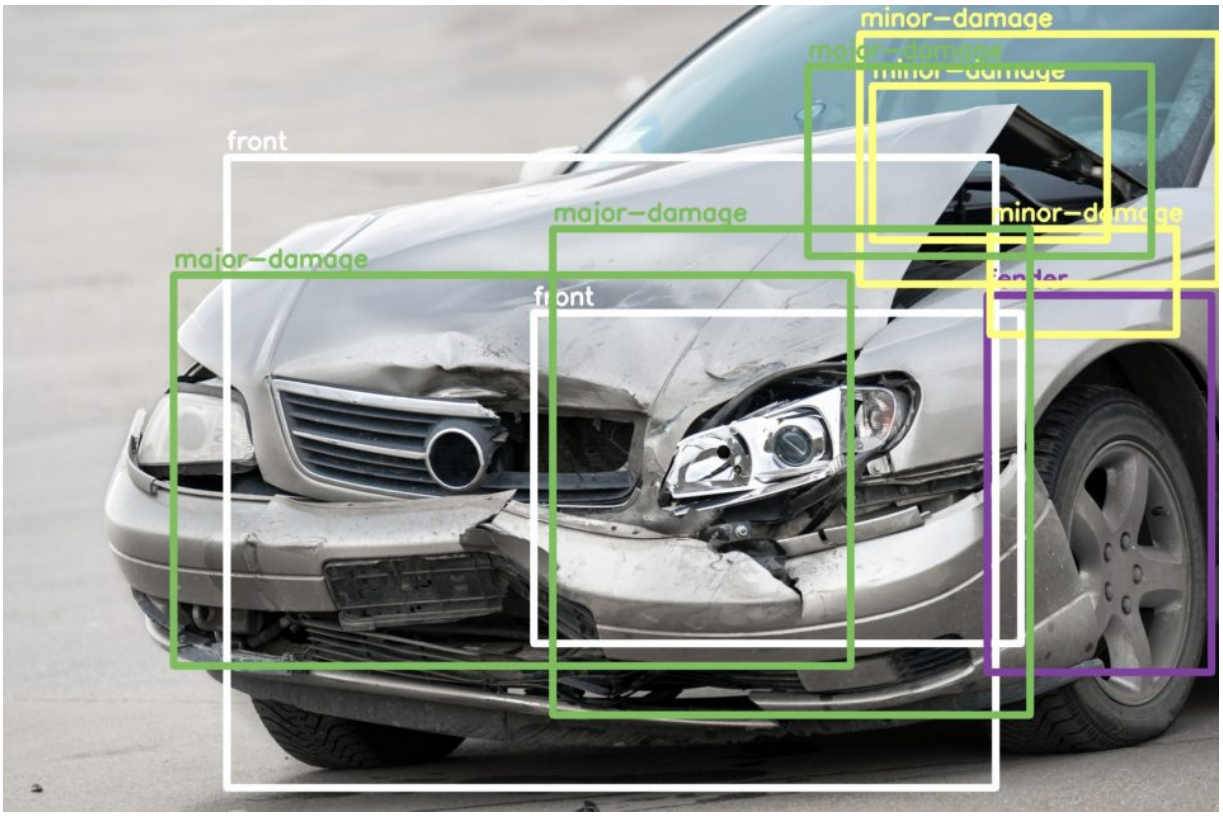
Automated Car Damage Detection with AI for Remote Assessment

The insurance sector has to stick to strict regulations which sometimes cause delays in obtaining insurance for its customers. McKinsey estimates that AI investments could potentially cost insurers as much as $1.3 trillion annually. However, the losses caused by fraud and inaccurate assessment overreach this sum considerably. The process of

analysis of insurance claims is often delayed because the inspection involves human intervention. AI-powered technology allows for automatic car repair detection and auto-detection monitoring with the possibility of manual intervention.

Why do insurance companies need AI-powered solutions?

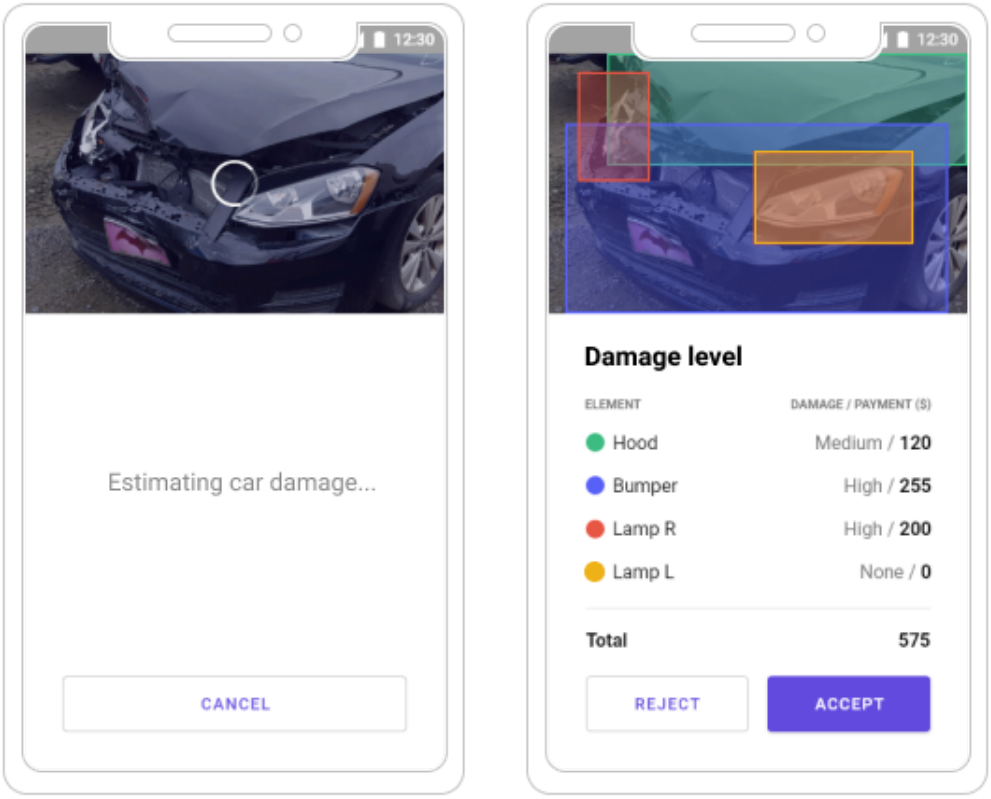
Automation of daily operations, lower expenses, and data-driven decision-making are among the key factor why businesses are actively implementing machine learning models and AI technologies. And insurance companies are not an exception.



AI-powered solutions enable more efficient insurance claim management, lower expenses, increase the quality of service and enhance customer experience.

AI-based car damage detection

Car Damage Assessment is a set of tools and processes which allows companies to provide users with automatic analysis of car damage. It's important because it allows getting damage reports and repair cost estimation in minutes without waiting for an inspector.



Data processing

Vehicle damage detection has become possible thanks to proper training data and the installation of the necessary machine learning algorithms. The processing of each insurance claim presupposes the

following steps:

1. Process user’s image of the damaged vehicle
2. Analyze car model
3. Analyze car angle
4. Locate damaged car parts
5. Analyze component damage severity
6. Prepare report

Business perspectives

There are 2 major groups of potential customers of Damage Assessment Services:

Insurance Companies:

- Decrease the level of fraud
- Improve signing speed and efficiency

Car rentals:

- Decrease operational costs
- Increase retention rate
- Increase customers happiness