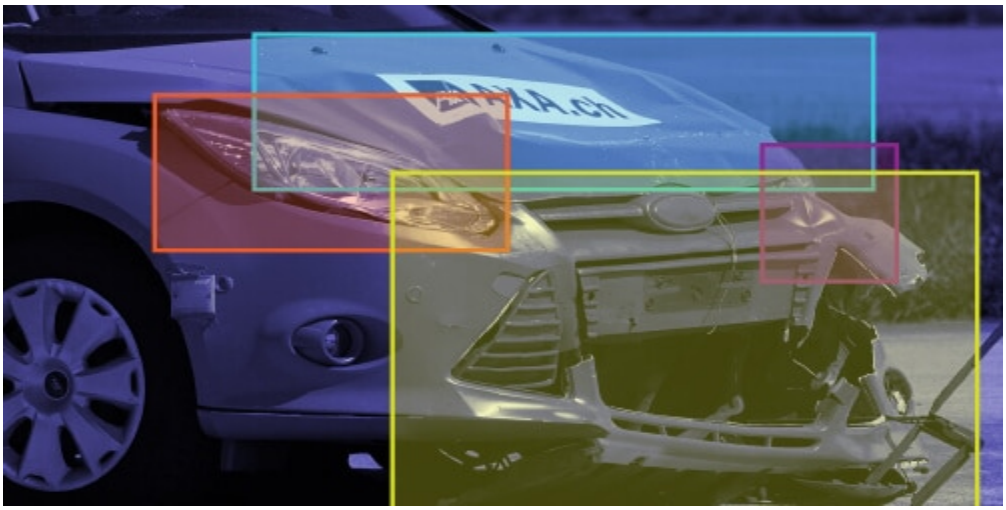
LITERATURE PROJECT ON INTELLIGENT VEHICLE DAMAGE ASSESMENT AND COST ESTIMATOR FOR INSURANCE COMPANY

Data Collection

Training ML models require a huge set of relevant image/video data. The more the data from different sources, the better would be the model. We work with large car insurance companies that already have numerous images of broken car parts. We can help you collect images and/or videos with a 360° angle from across the globe to train your ML models.

Data Licensing

License off-the-shelf Vehicle image dataset/Car image dataset to train machine learning models to accurately assess vehicle damage, so as to predict insurance claims while minimizing loss for the insurance companies.



Data Annotation

Once the data is collected the system should automatically identify and analyze objects and scenarios to assess the damages in the real world. This is where data annotators help you annotate thousands of images/videos which further can be used to train ML models.

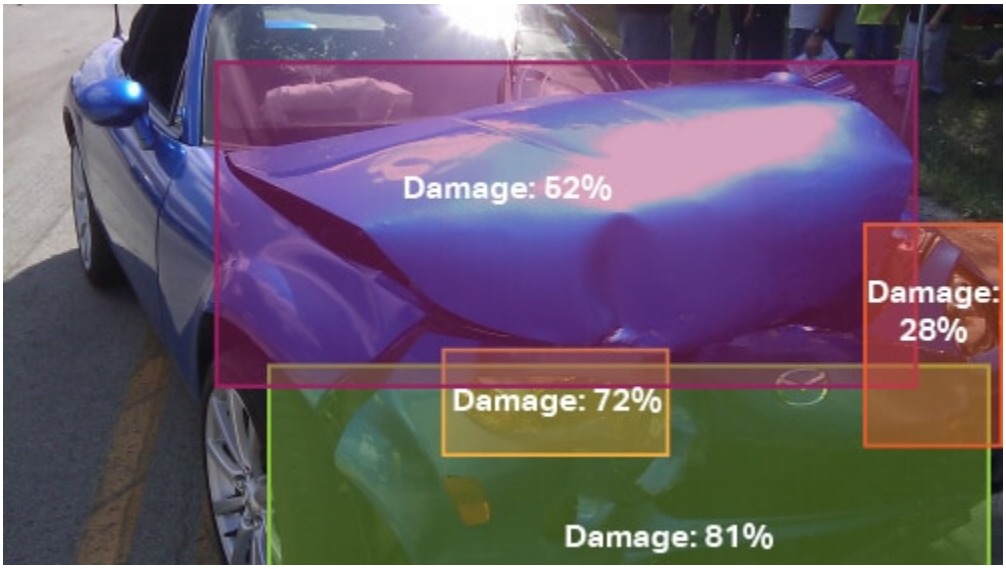
The annotators can help you annotate a dent, ding, or crack from the outer/inner panels of the car which includes: bumpers, fenders, quarter panels, doors, hoods, engine, seats, storage, trunks, etc.

Data Segmentation

Once the data is annotated the same can be segmented or classified as:

- Damage vs non-damaged
- Damage Side: Front, Rear, Back

- The severity of the damage: Minor, Moderate, Severe
- Damage Classification: Bumper dent, Door dent, Glass shatters, Headlamp Broken, Tail lamp broken, Scratch, Smash, No damage, etc.



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