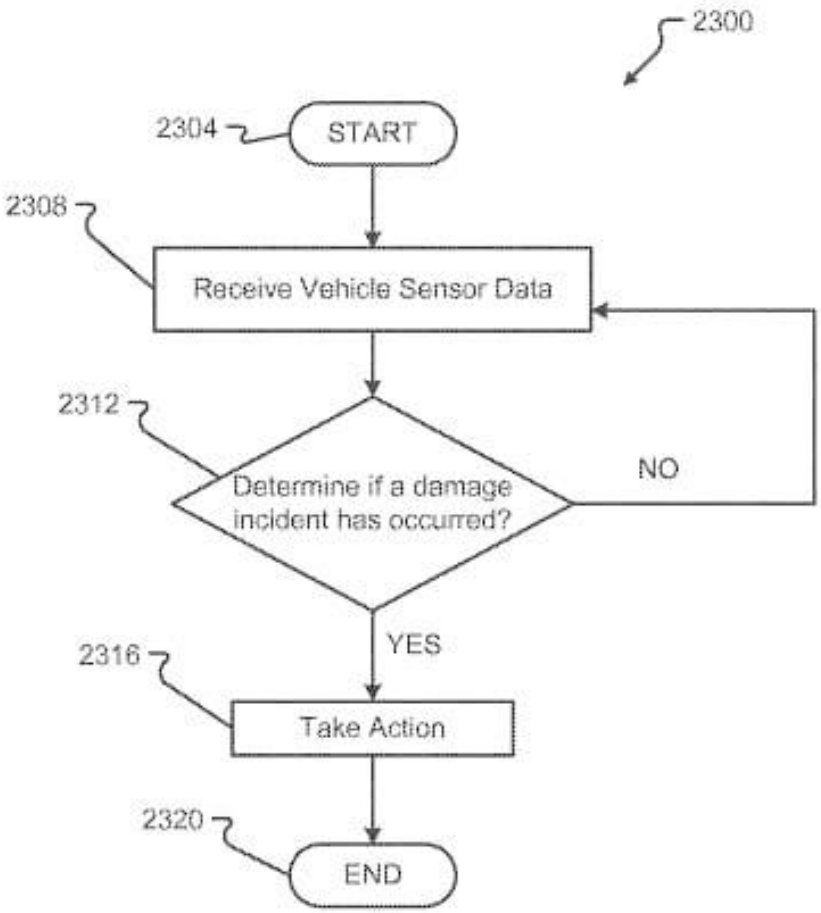
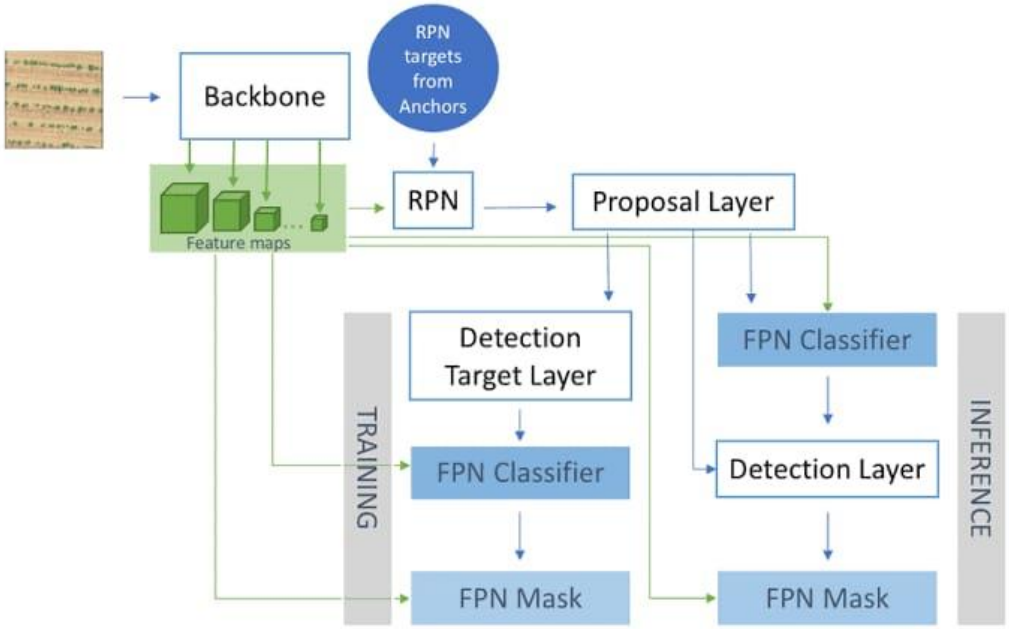
TECHNOLOGY ARCHITECTURE

Intelligent Vehicle Damage Assessment and Cost Estimator for Insurance Companies

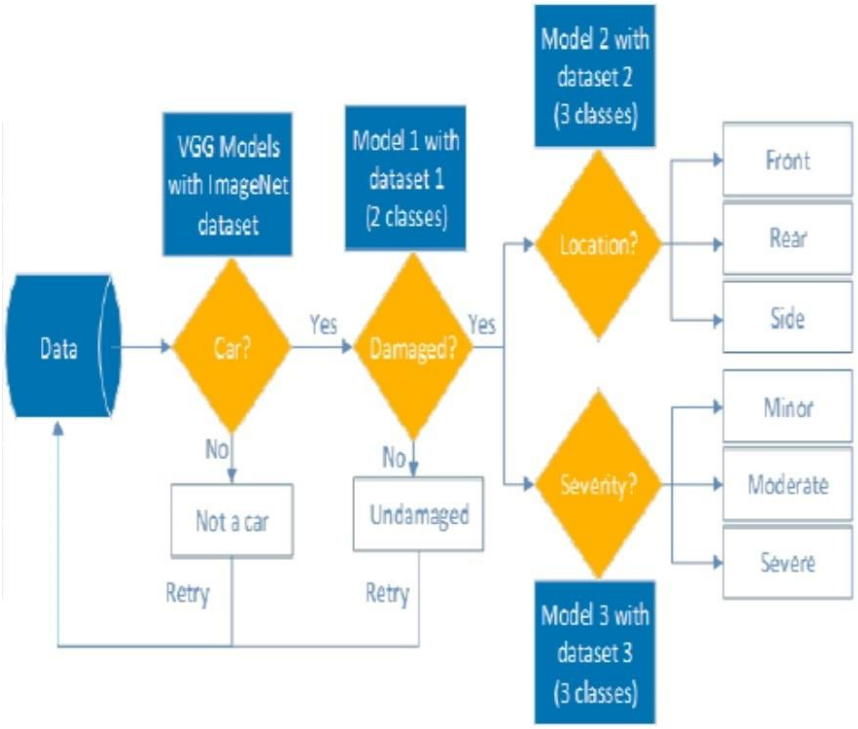
ARCHITECTURE FLOW :



ALGORITHM FLOW :



DATASET FLOW:



ACCURACY CHART:

Table 1: Performance analysis of car damage assessment

	Performance of damage detection			Performance of damage location			Performance of damage severity		
Pre-trained VGG	Precision	Recall	F1-score	Precision	Recall	F1-score	Precision	Recall	F1-score
VGG16	0.94	0.94	0.94	0.71	0.69	0.69	0.61	0.55	0.53
VGG19	0.91	0.91	0.91	0.71	0.66	0.66	0.59	0.54	0.51

Table 2: Accuracy of car damage assessment

	Performance of damage detection			Performance of damage location			Performance of damage severity		
Pre-trained VGG	Without L2	With L2	Fine-tuning	Without L2	With L2	Fine-tuning	Without L2	With L2	Fine-tuning
VGG16	0.9456	0.9456	0.9283	0.7030	0.7439	0.7342	0.5338	0.5480	0.5268
VGG19	0.9457	0.9522	0.9086	0.7039	0.7648	0.7318	0.5731	0.5789	0.5614

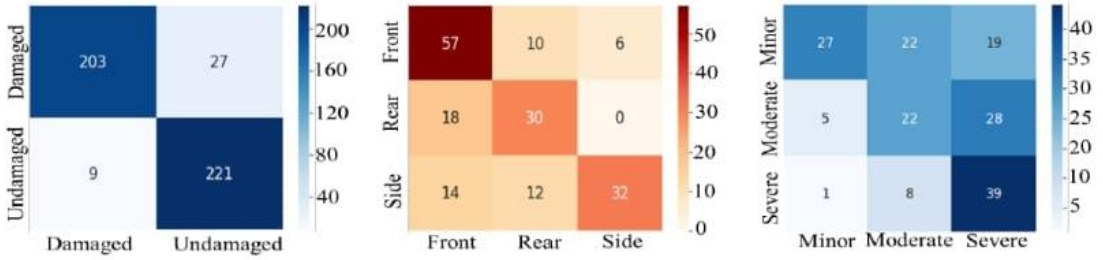


Figure 2: Confusion matrices for car damage assessment of VGG16

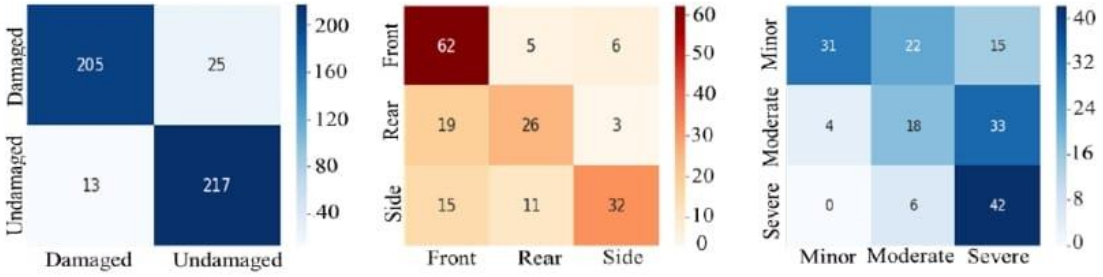


Figure 3: Confusion matrices for car damage assessment of VGG19