Model Summary Report for YOLOv5s Student Model

Knowledge Distillation on Object Detection Task

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Model	mAP	aero	bicycle	bird	boat	bottle	bus	car	cat	chair	cow	table	dog	horse	mbike	person	plant	sheep	sofa	train	tv
yolov5s	0.188	0.24	0.216	0.106	0.0887	0.0472	0.331	0.409	0.175	0.126	0.213	0.0895	0.149	0.154	0.228	0.318	0.204	0.0567	0.105	0.25	0.262

Table 1: Imitation with halved student model with YOLOv5s model on VOC Dataset Classes

Class	Images	Instances	P (Precision)	R (Recall)	mAP@50	mAP@50-95
all	157	898	0.933	0.886	0.934	0.677
canker	157	836	0.872	0.773	0.872	0.402
healthy	157	62	0.994	1.000	0.995	0.953

Table 2: Imitation with halved student model with YOLOv5s model on lemon-disease-detection-2 dataset

Class	Images	Instances	P (Precision)	R (Recall)	mAP@50	mAP@50-95
all	31	31	0.999	1.000	0.995	0.551

Table 3: Imitation with halved student model with YOLOv5s model on gun-detection dataset

Class	Images	Instances	P (Precision)	R (Recall)	mAP@50	mAP@50-95
all	73	967	0.83	0.926	0.916	0.591
Platelets	73	76	0.786	0.934	0.898	0.45
RBC	73	819	0.754	0.844	0.874	0.592
WBC	73	72	0.951	1.000	0.977	0.73

Table 4: Imitation with halved student model with YOLOv5s model on BCCD dataset

Class	Images	Instances	P (Precision)	R (Recall)	mAP@50	mAP@50-95
all	8	8	0.751	0.756	0.855	0.361

Table 5: Imitation with halved student model with YOLOv5s model on MOG detection dataset