Topic 2 - Face Detection

Group 57

Jun 27, 2024

YOLOv10-L Model Performance

				Box(P		mAP50	mAP50-95):	100% 342	↓ ⊝ ■	-
		5460	46458	0.862	0.668	0.735	0.419	ጥ	₩	•
Epoch	GPU_mem	box_om	cls_om	dfl_om	box_oo	cls_oo	dfl_oo	Instances		
49/50	12.7G		0.5165	1.108	1.419	0.6591	1.071		640: 1	80% 32
	Class	Images	Instances	Box(P		mAP50	mAP50-95):	100% 342/342	[01:42<00:	8 0, 3
		5460	46458	0.861	0.668	0.735	0.419			
Epoch	GPU_mem	box_om	cls_om	dfl_om	box_oo	cls_oo	dfl_oo	Instances		
50/50	14.7G		0.5122		1.417	0.6588	1.065		640: 1	80% 32
30/30	Class								F04 - 42 - 00 -	
	Class	Images	Instances	Box(P		mAP50	MAP50-95):	100% 342/342	[01:42(00:	8 0, 3
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Figure 1: Train model

YOLOv10-L Model Performance

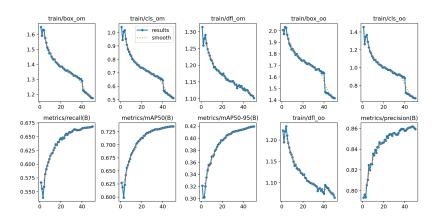


Figure 2: Train model result

Comparison with Other Models

• Accuracy and Speed:

- Our model showed competitive precision and recall rates compared to other leading models.
- The average precision (mAP@0.5) was 73.5%, while the mAP@0.5:0.95 reached 41.9%.
- The inference speed was efficient, making our model suitable for real-time applications.

Resource Utilization:

- The model demonstrated efficient GPU memory usage, with a peak of 17.2G during training.
- The combination of precision, speed, and resource efficiency highlights the robustness of our model for face detection tasks.