

Engy Abdelmalak Khillah

2022170078

4th year SC

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Loaded 4888 annotations
Classes: ['Platelets', 'RBC', 'WBC']

Class Distribution:
  Platelets: 361 (7.4%)
  RBC: 4155 (85.0%)
  WBC: 372 (7.6%)
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METRICS
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Precision: 0.8469
Recall: 0.9217
mAP50: 0.9298
mAP50-95: 0.6396

Per-Class:

Platelets:
  P: 0.8339
  R: 0.9040
  mAP50: 0.9268
  mAP50-95: 0.5056

RBC:
  P: 0.7560
  R: 0.8611
  mAP50: 0.8678
  mAP50-95: 0.6064

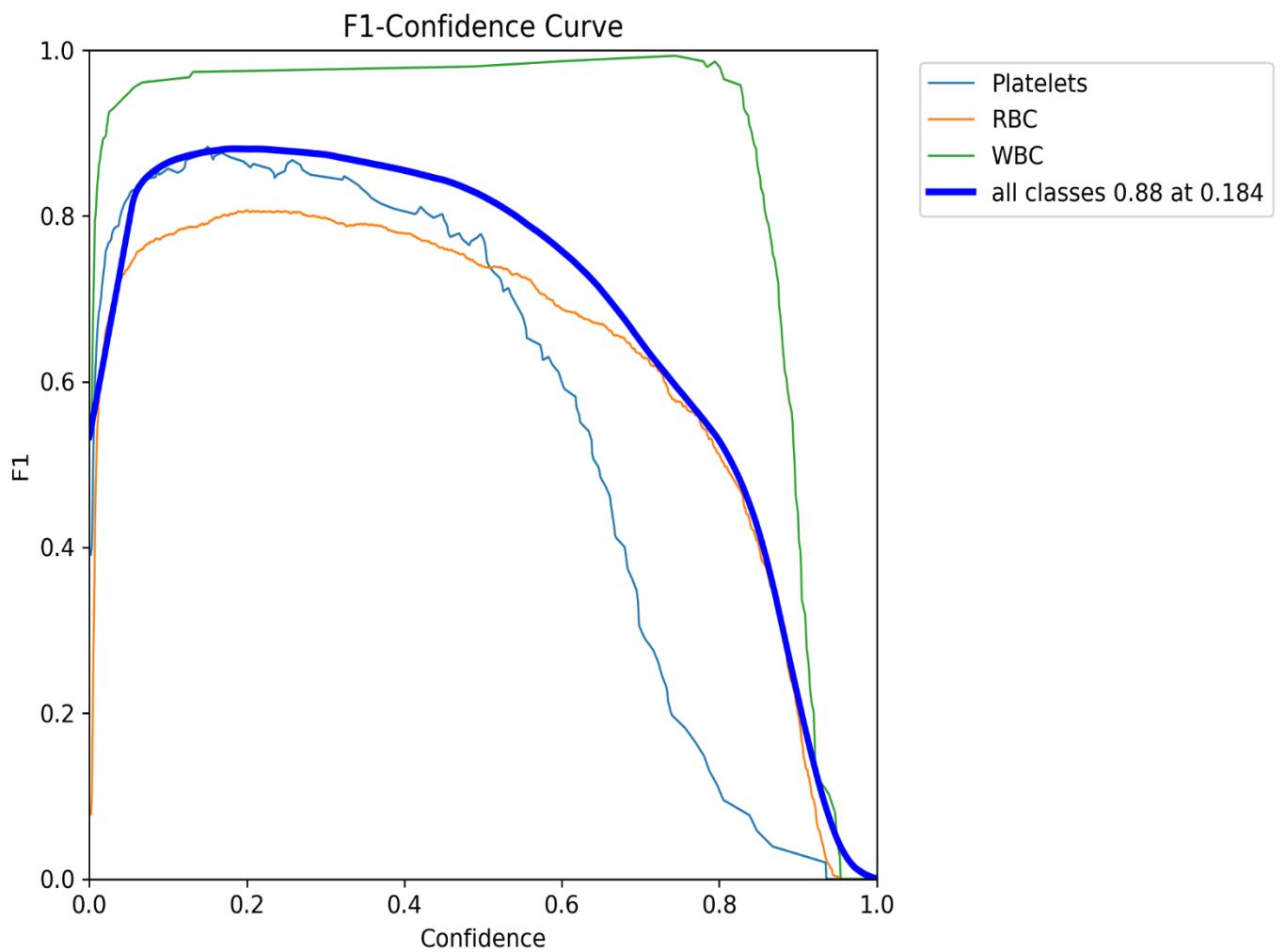
WBC:
  P: 0.9508
  R: 1.0000
  mAP50: 0.9947
  mAP50-95: 0.8068
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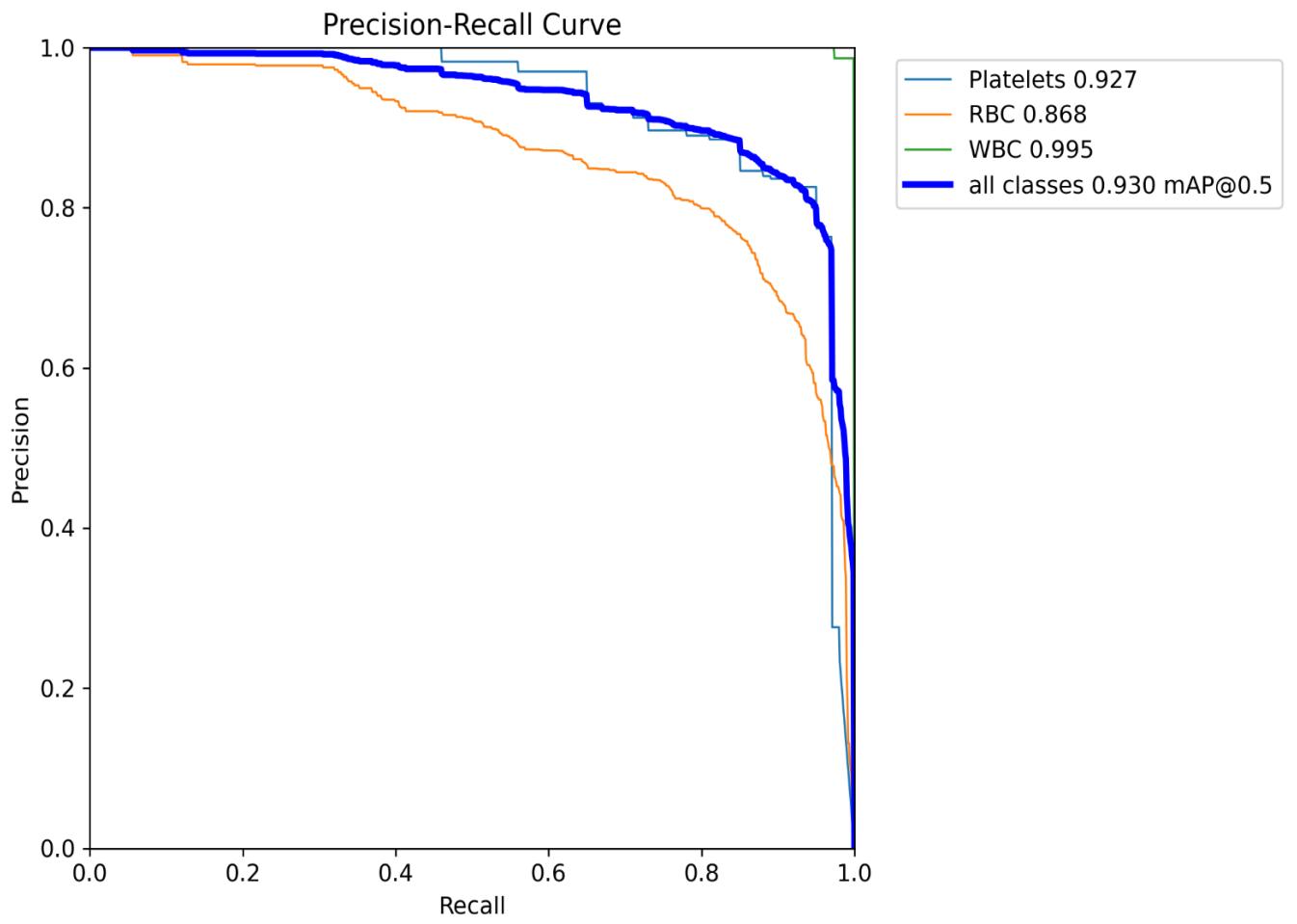
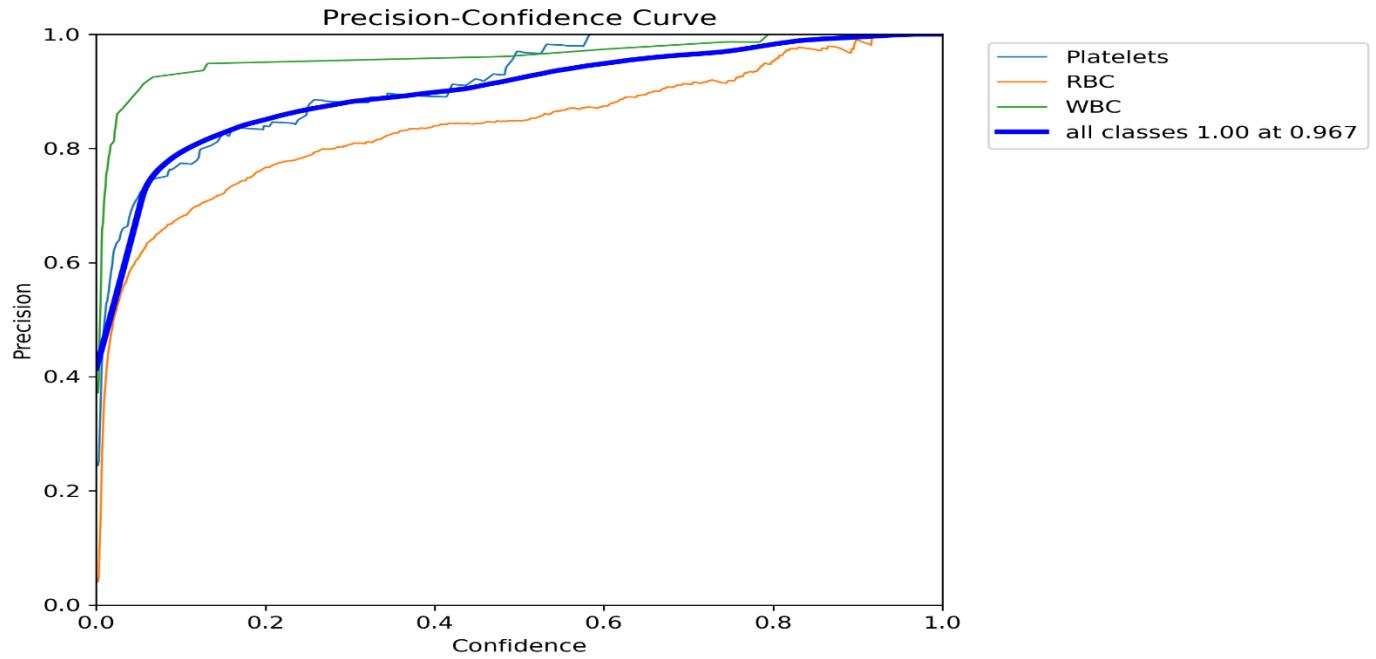
Table 1: Overall Performance

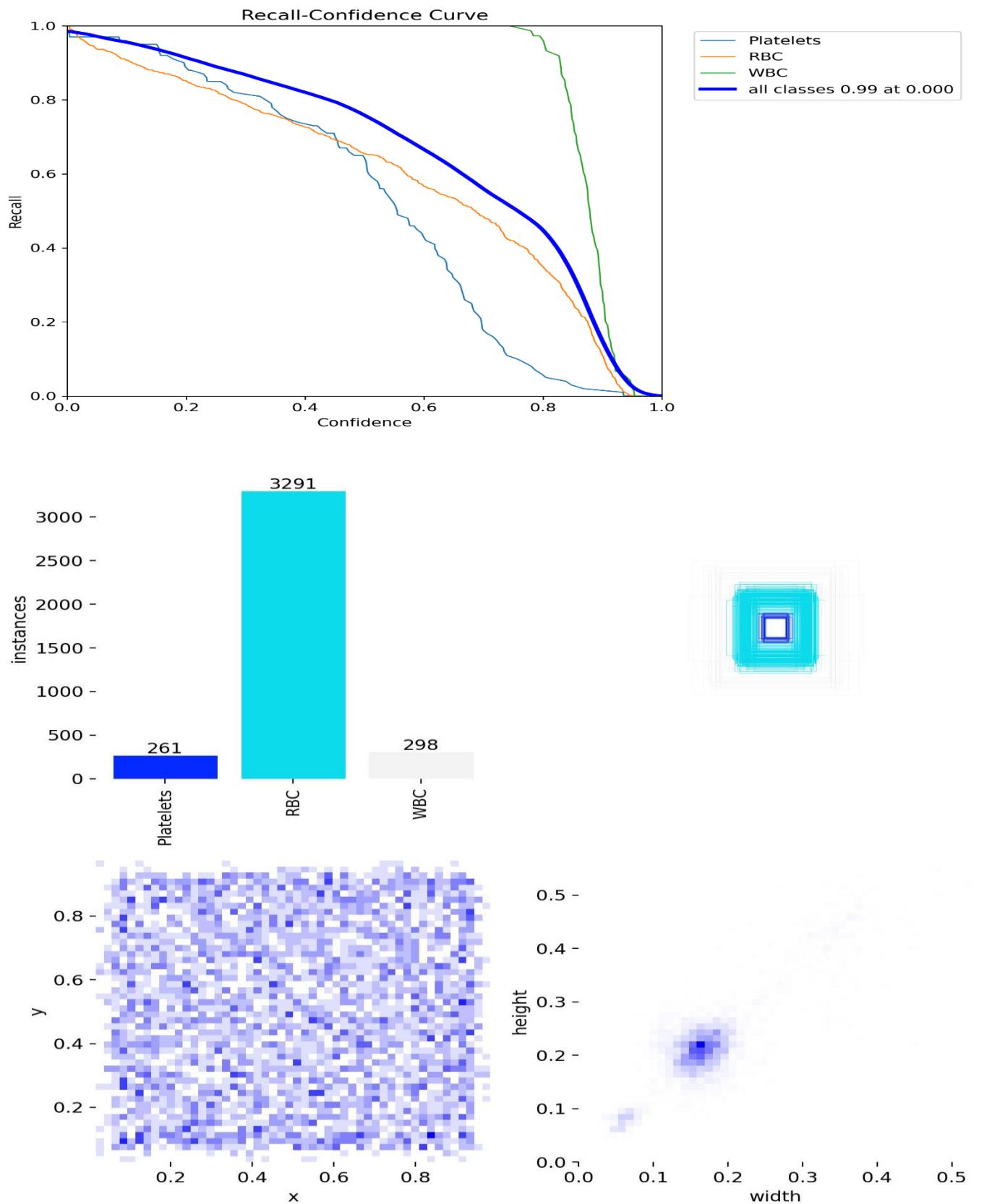
Metric	Value
mAP@0.5	0.9298
mAP@0.5:0.95	0.6396
Precision	0.8469
Recall	0.9217
F1-Score	0.8828

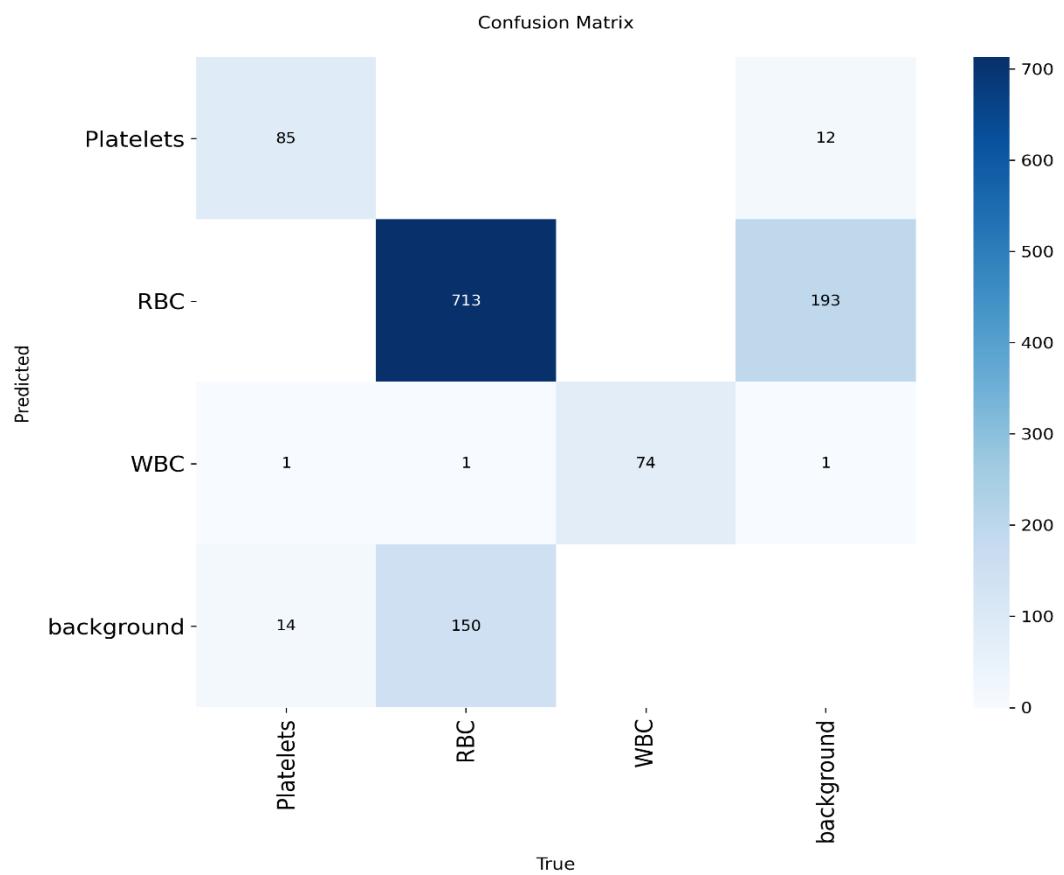
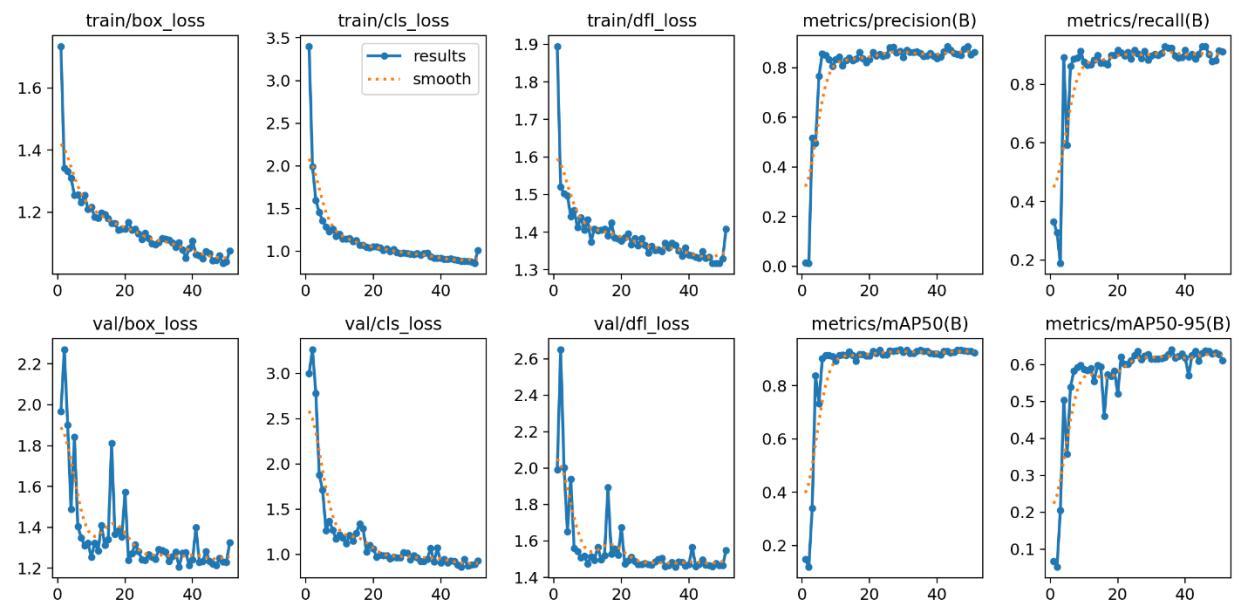
Table 2: Per-Class Performance

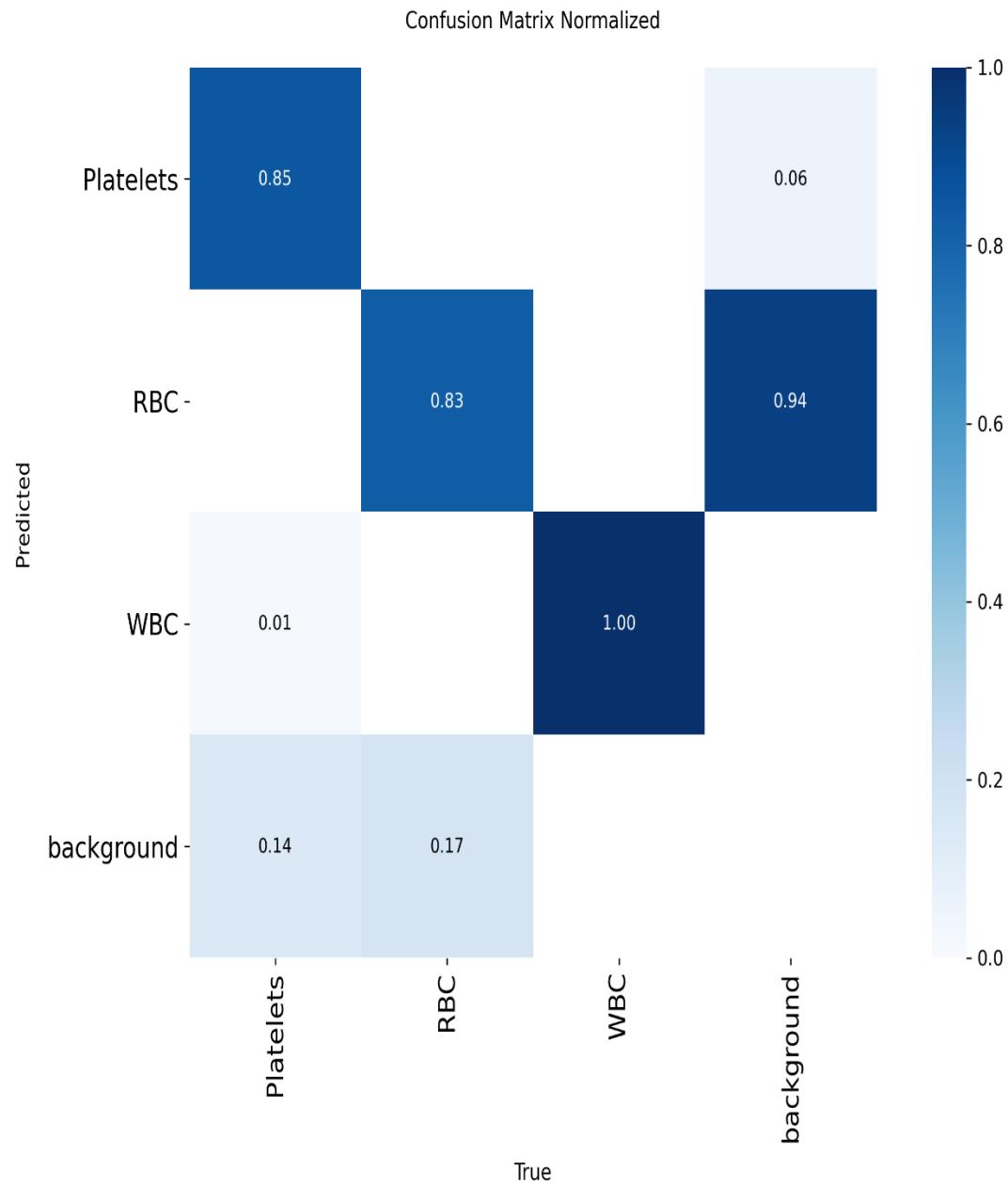
Class	mAP@0.5	mAP@0.5:0.95	Precision	Recall
WBC	0.9947	0.8068	0.9508	1.0000
Platelets	0.9268	0.5056	0.8339	0.9040
RBC	0.8678	0.6064	0.7560	0.8611

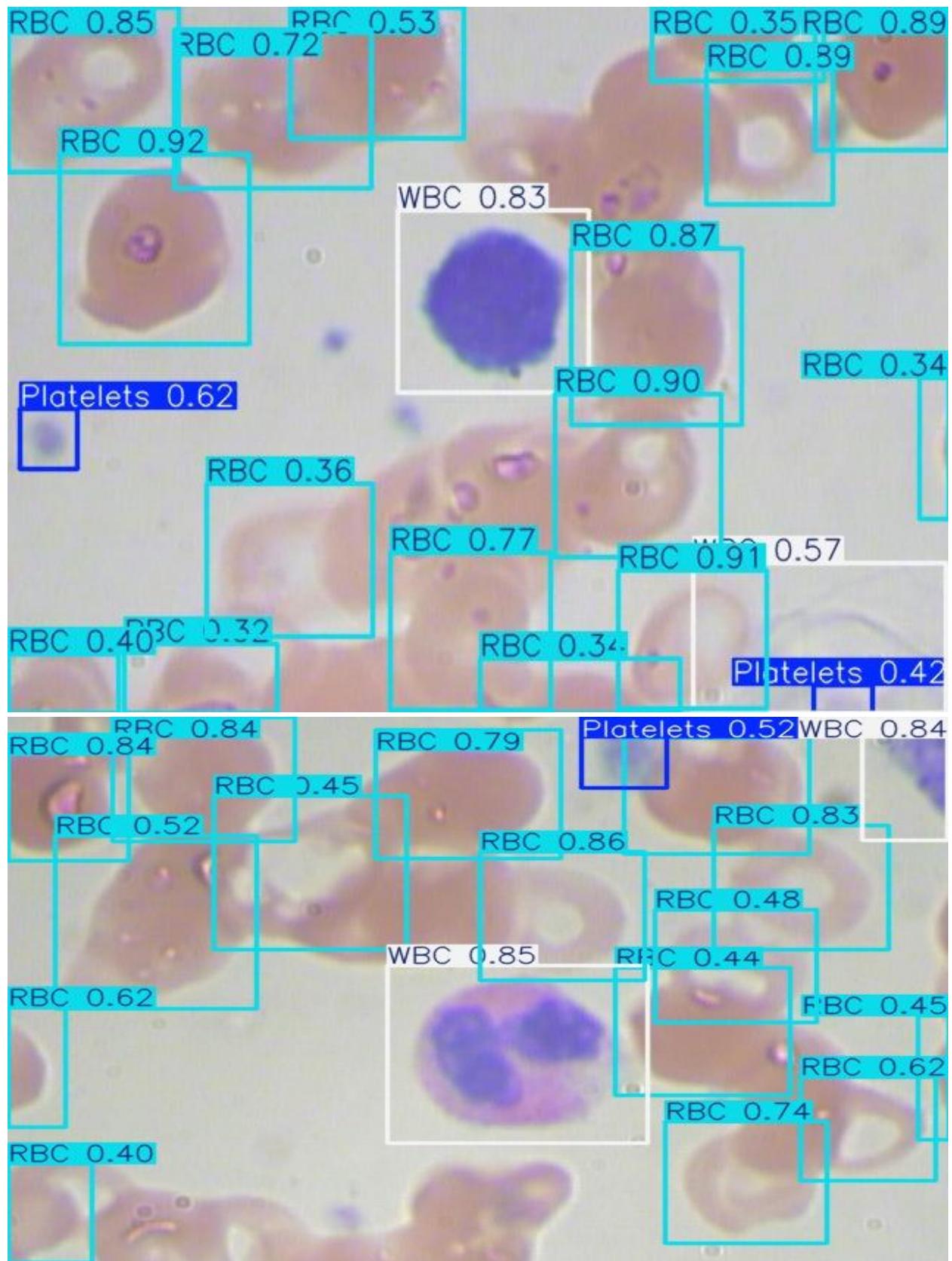


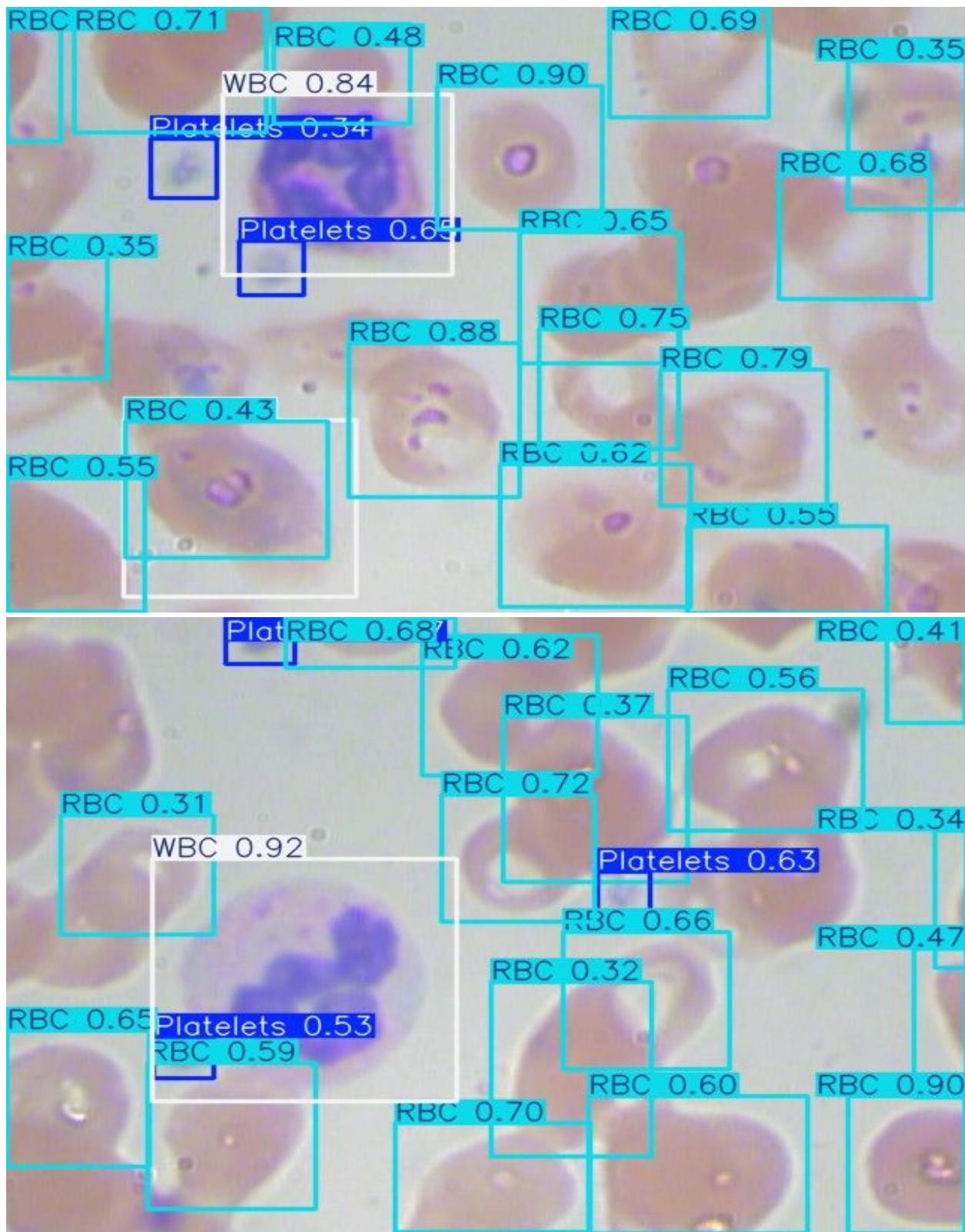


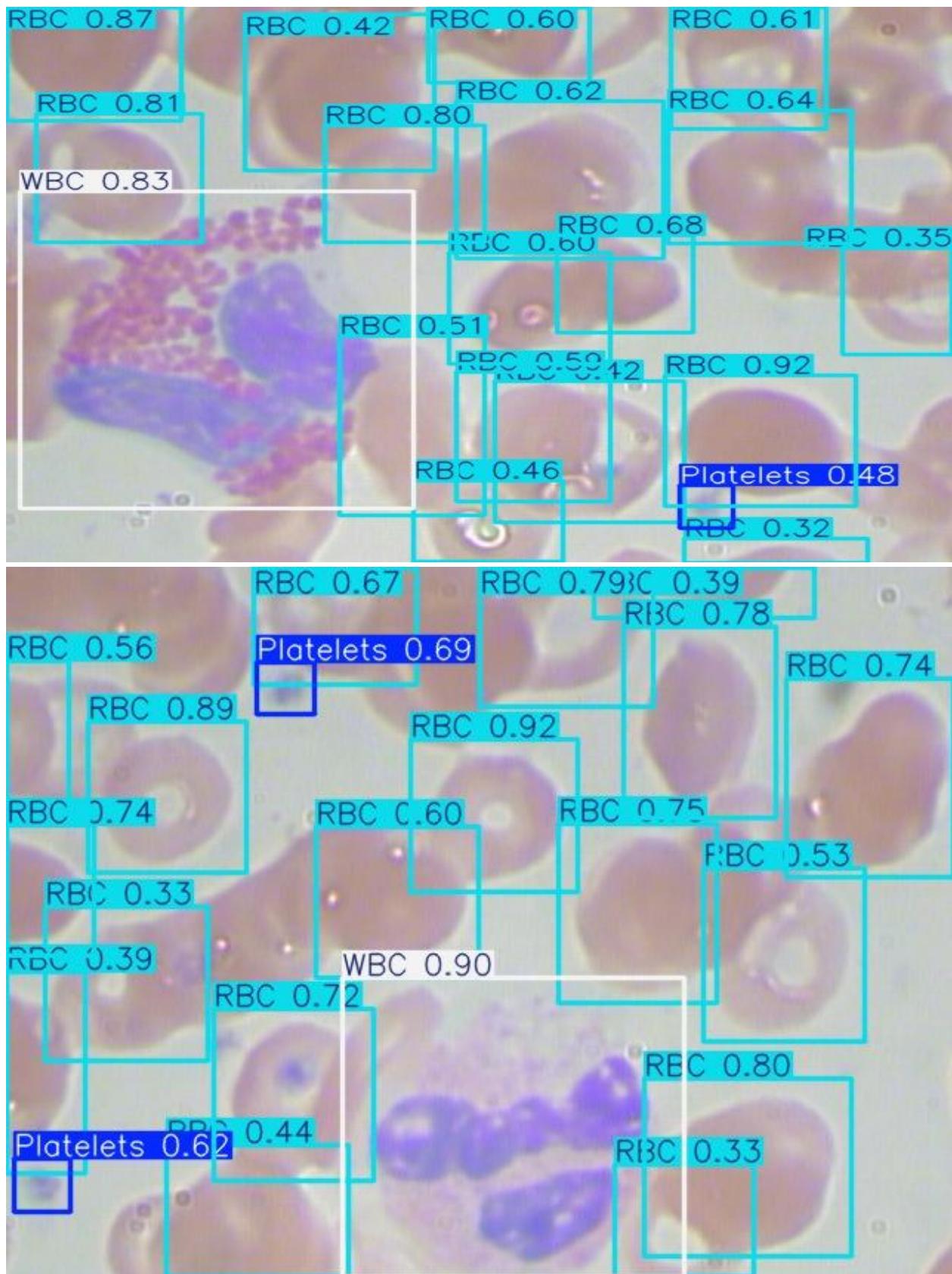


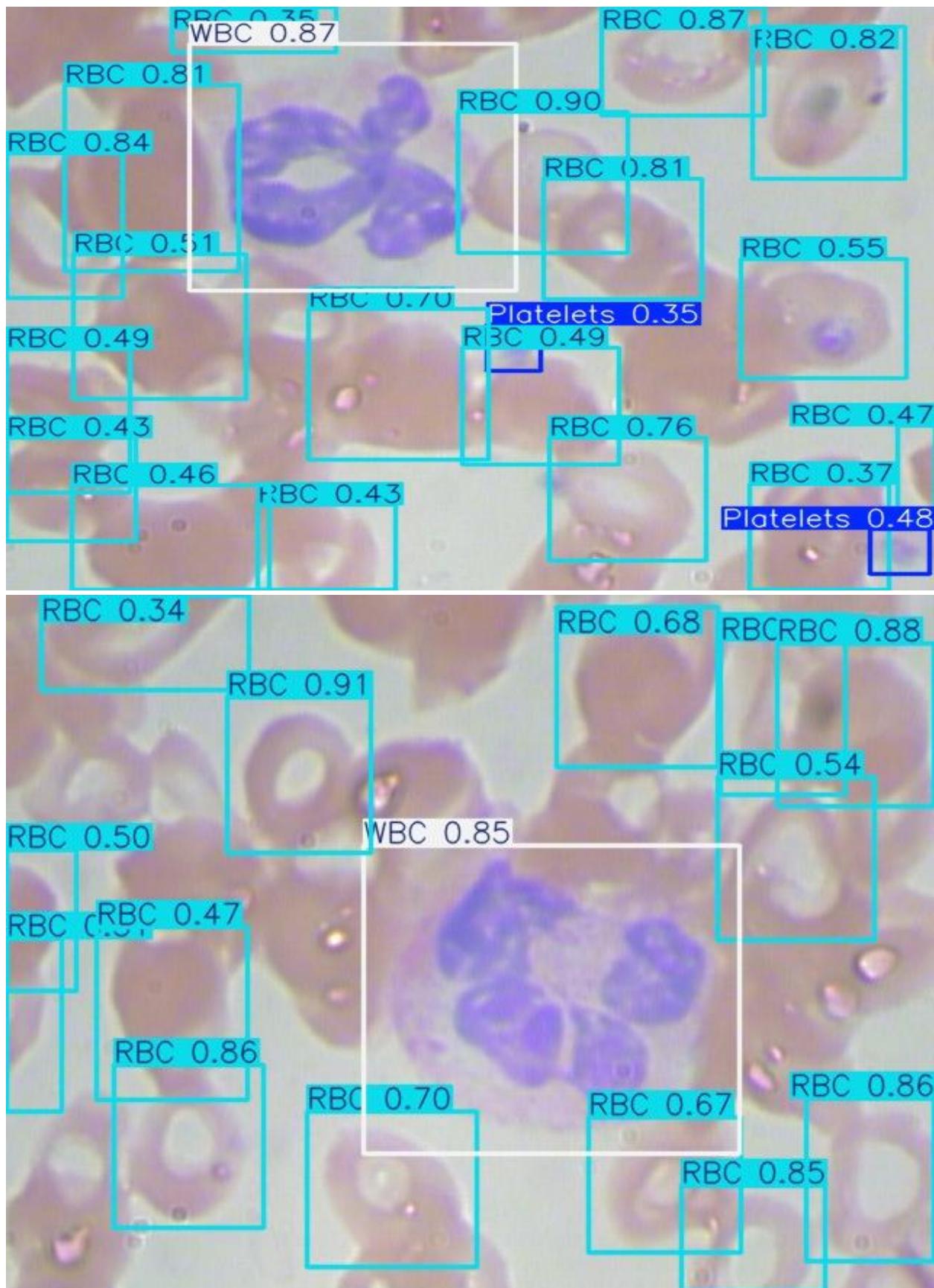












YOLO5

Class	Images	Instances	Box(P)	R	mAP50	mAP50-95	Time	TP	FP	FN	AP
all	73	1838	0.878	0.914	0.935	0.646	5.5	1.91	0.5	2.75	0.8779
Platelets	49	100	0.988	0.88	0.934	0.505					
RBC	70	864	0.76	0.862	0.878	0.62					
WBC	72	74	0.966	1	0.994	0.813					

Overall Metrics:

Precision: 0.8779
Recall: 0.9141
mAP@0.5: 0.9354
mAP@0.5:0.95: 0.6458

Per-Class Metrics:

Platelets:

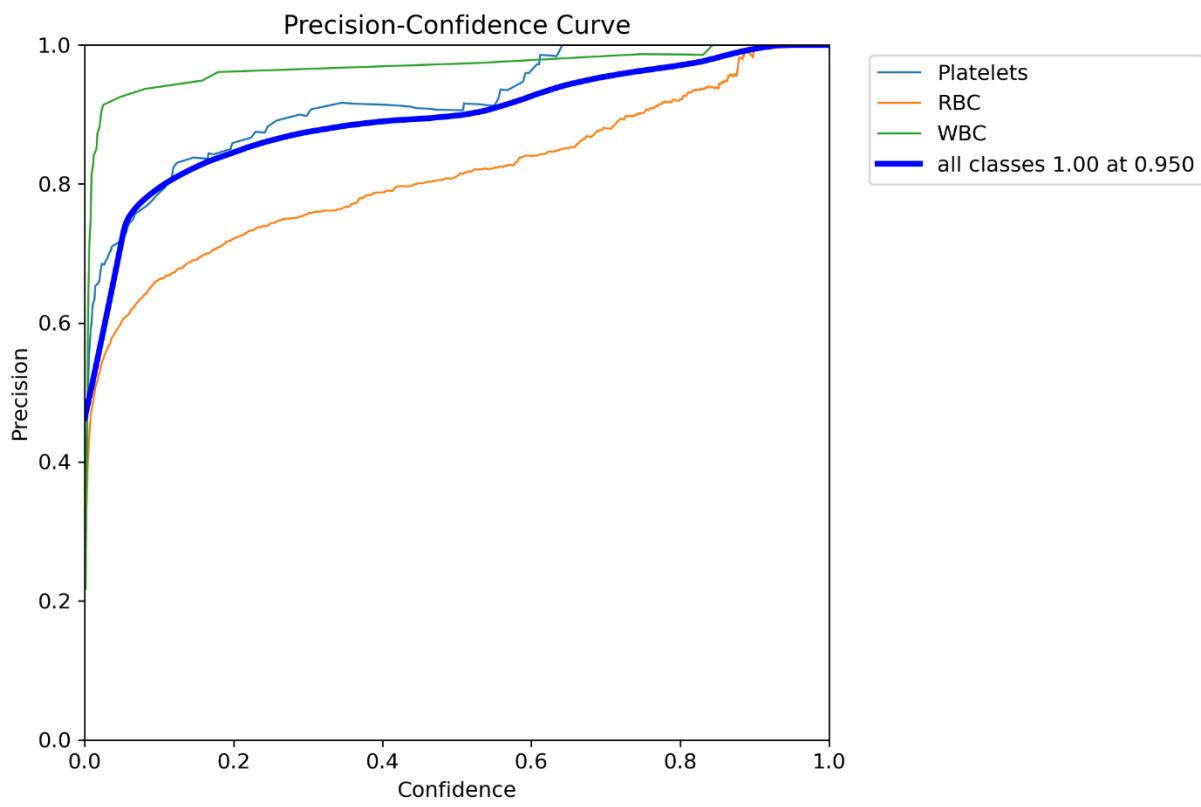
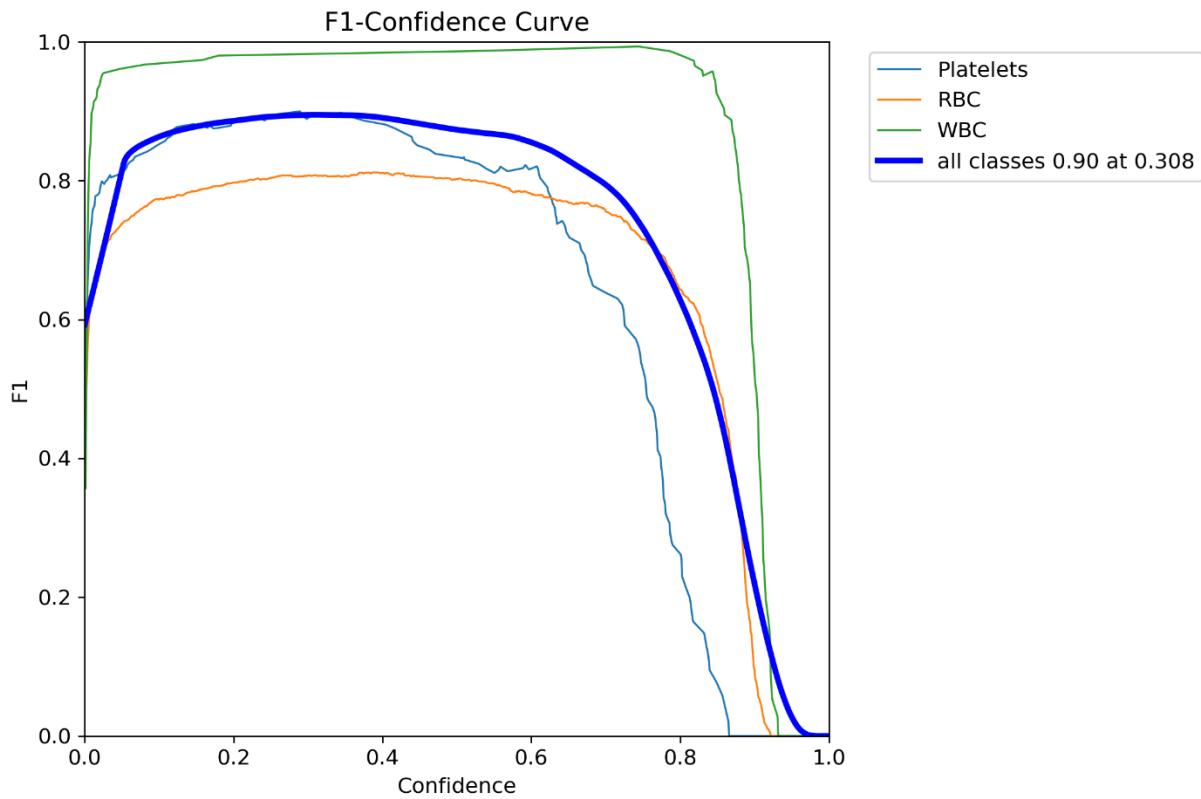
Precision: 0.9983
Recall: 0.8888
mAP@0.5: 0.9342
mAP@0.5:0.95: 0.5045

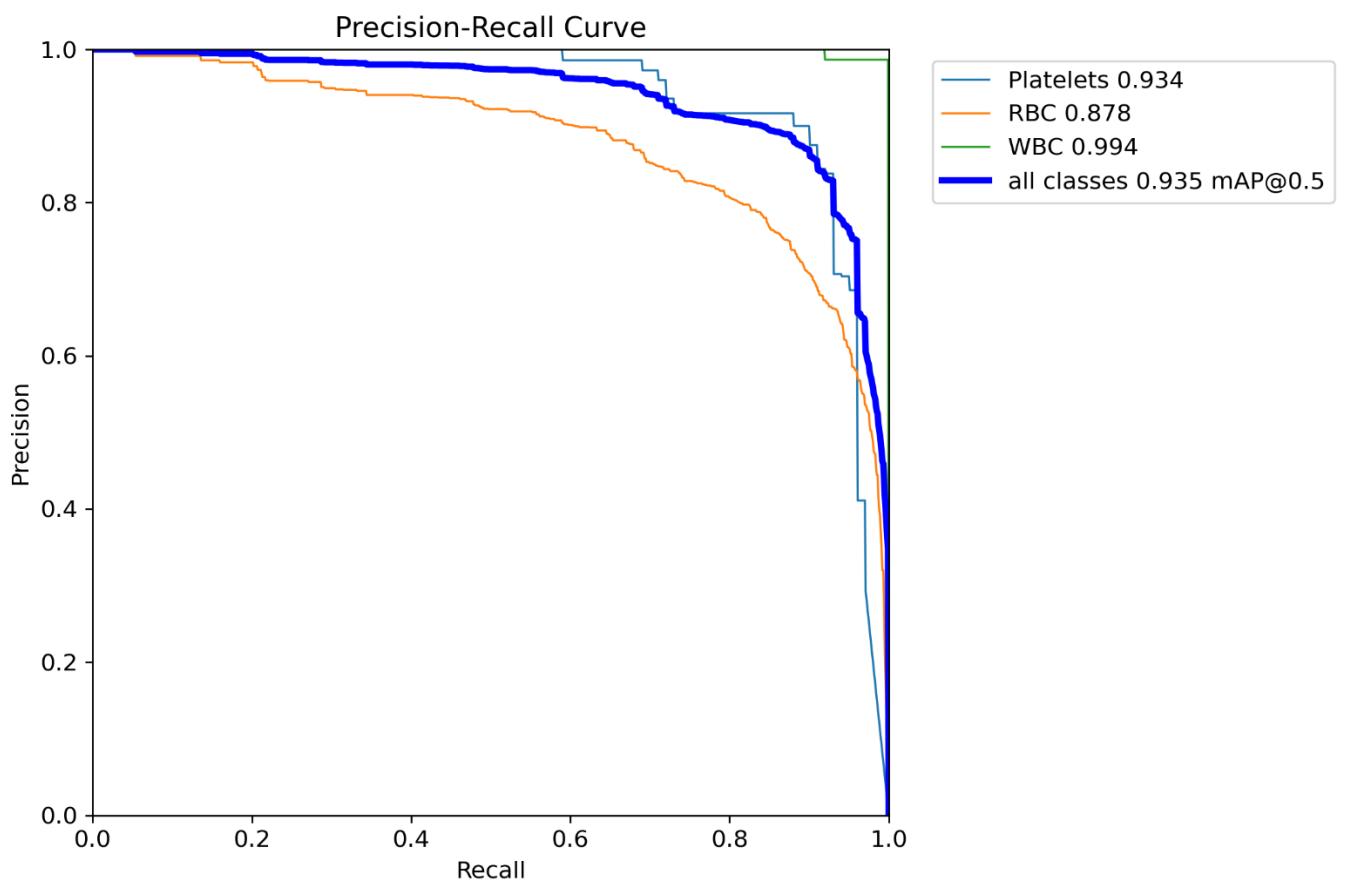
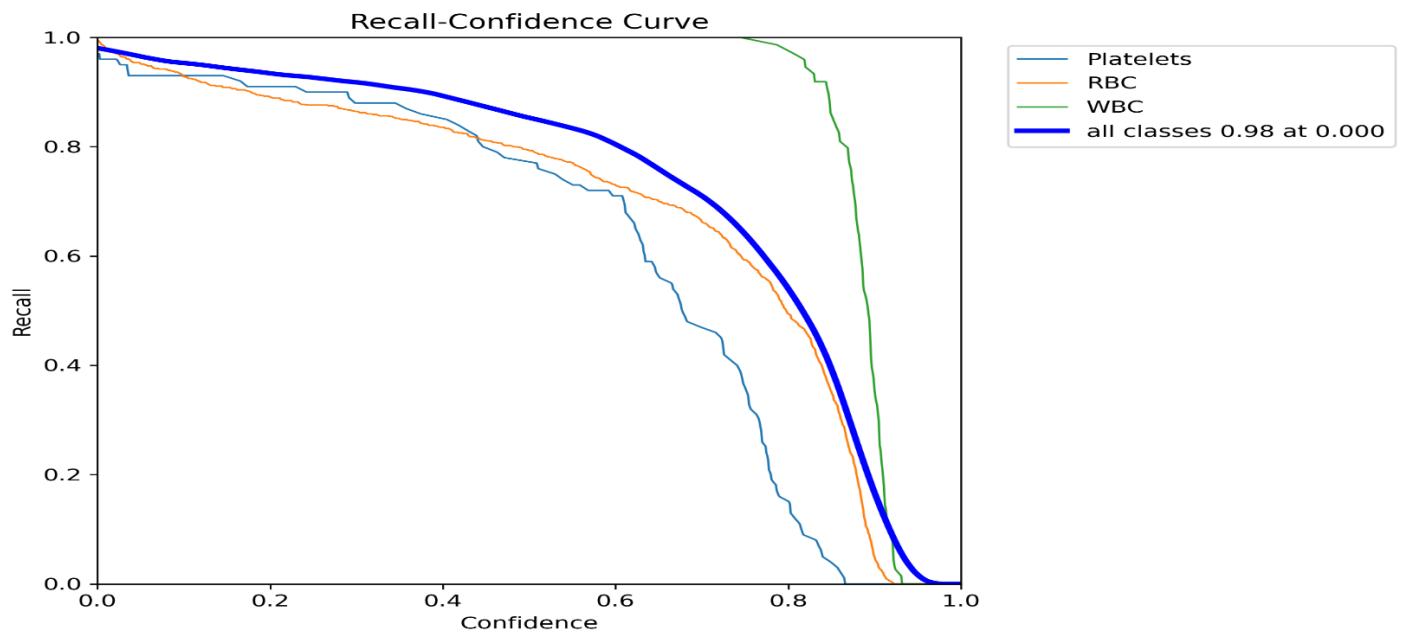
RBC:

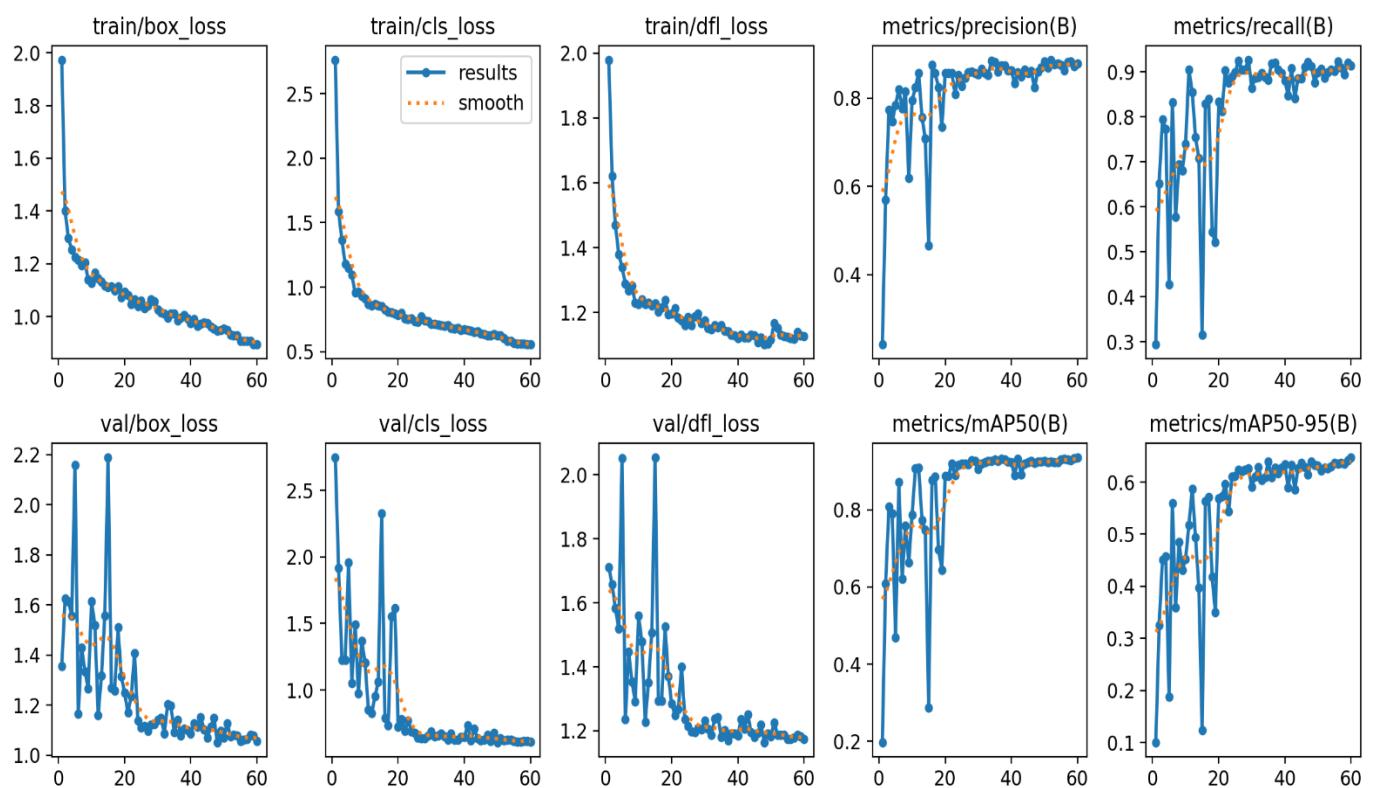
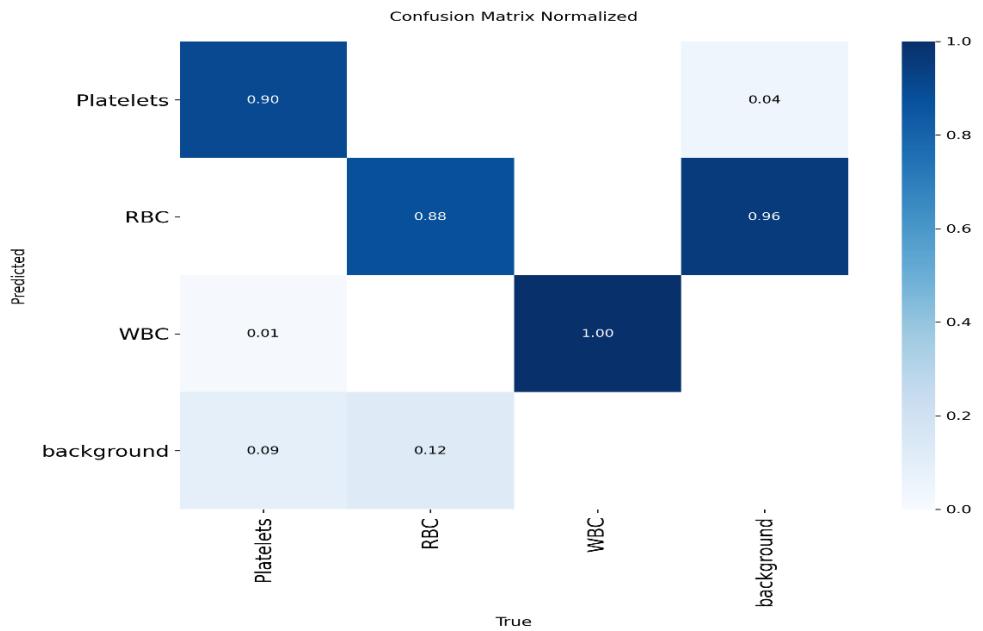
Precision: 0.7596
Recall: 0.8623
mAP@0.5: 0.8789
mAP@0.5:0.95: 0.6196

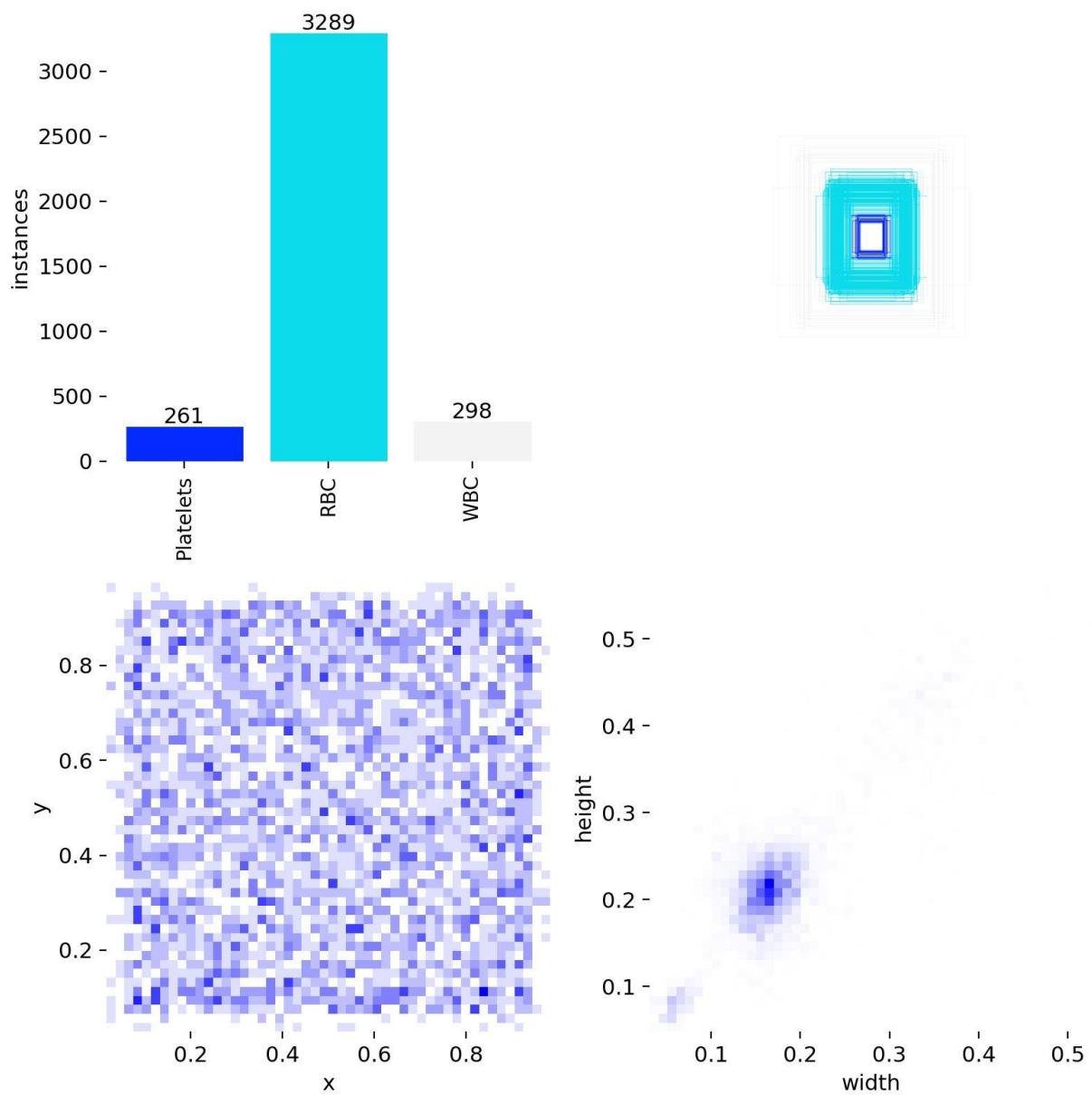
WBC:

Precision: 0.9658
Recall: 1.0000
mAP@0.5: 0.9939
mAP@0.5:0.95: 0.8133









YOLOv5 Blood Cell Predictions (Sample)

