

Engy Abdelmalak Khillah

2022170078

4th year SC

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

Class Distribution:
  Platelets: 361 (7.4%)
  RBC: 4155 (85.0%)
  WBC: 372 (7.6%)
```

Yolo 8 n

METRICS

```
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:

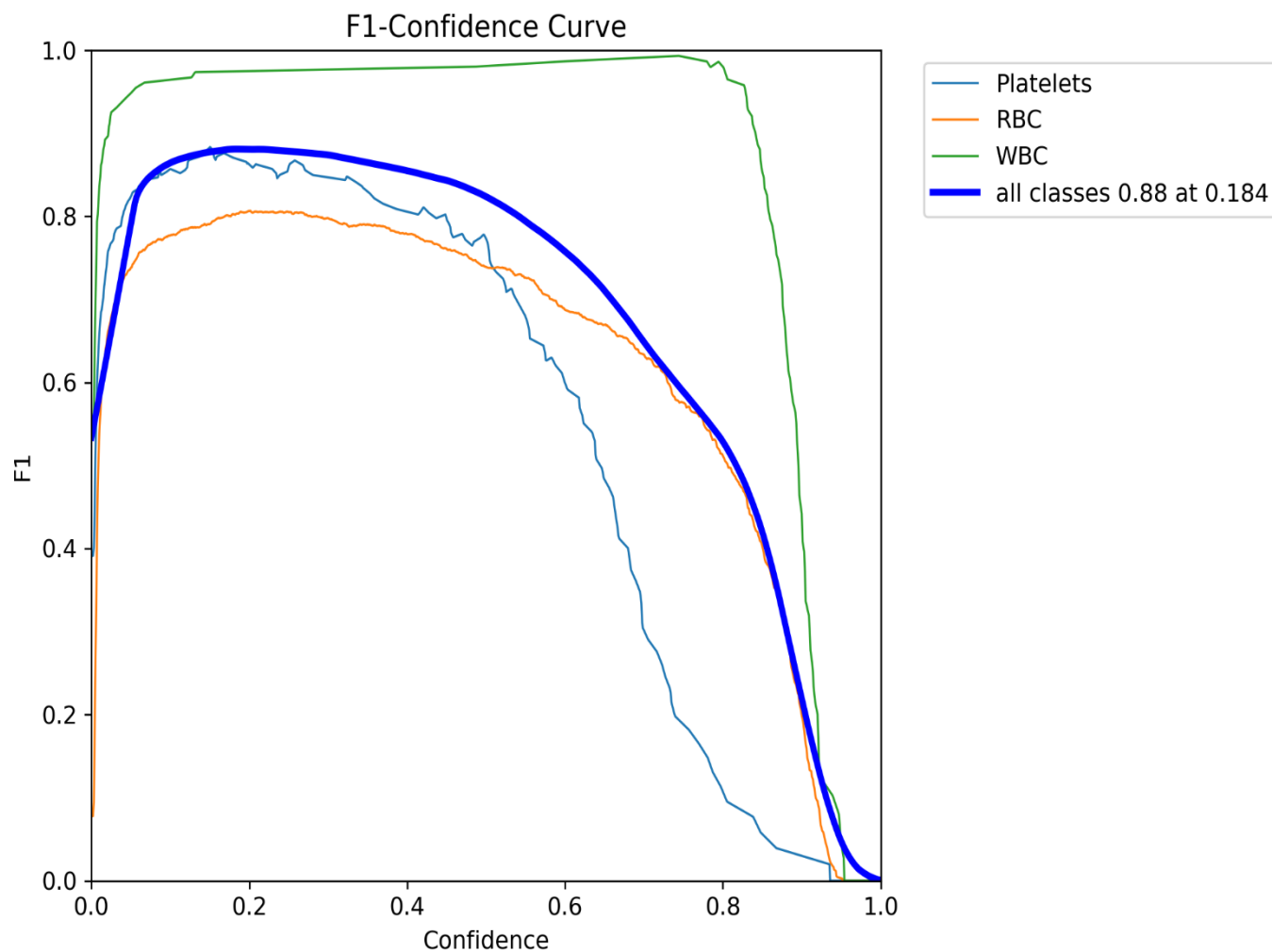
```
P: 0.9508
R: 1.0000
mAP50: 0.9947
mAP50-95: 0.8068
```

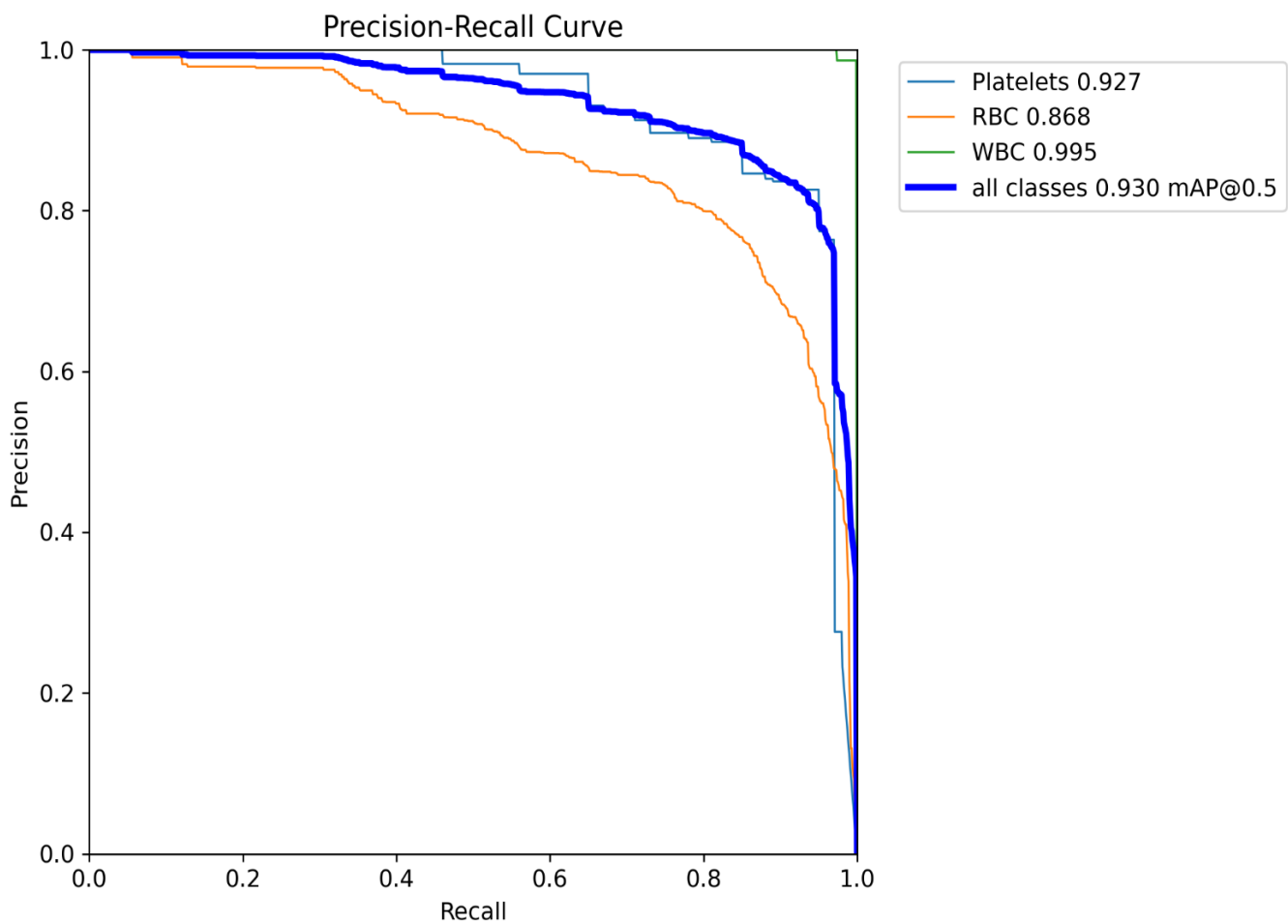
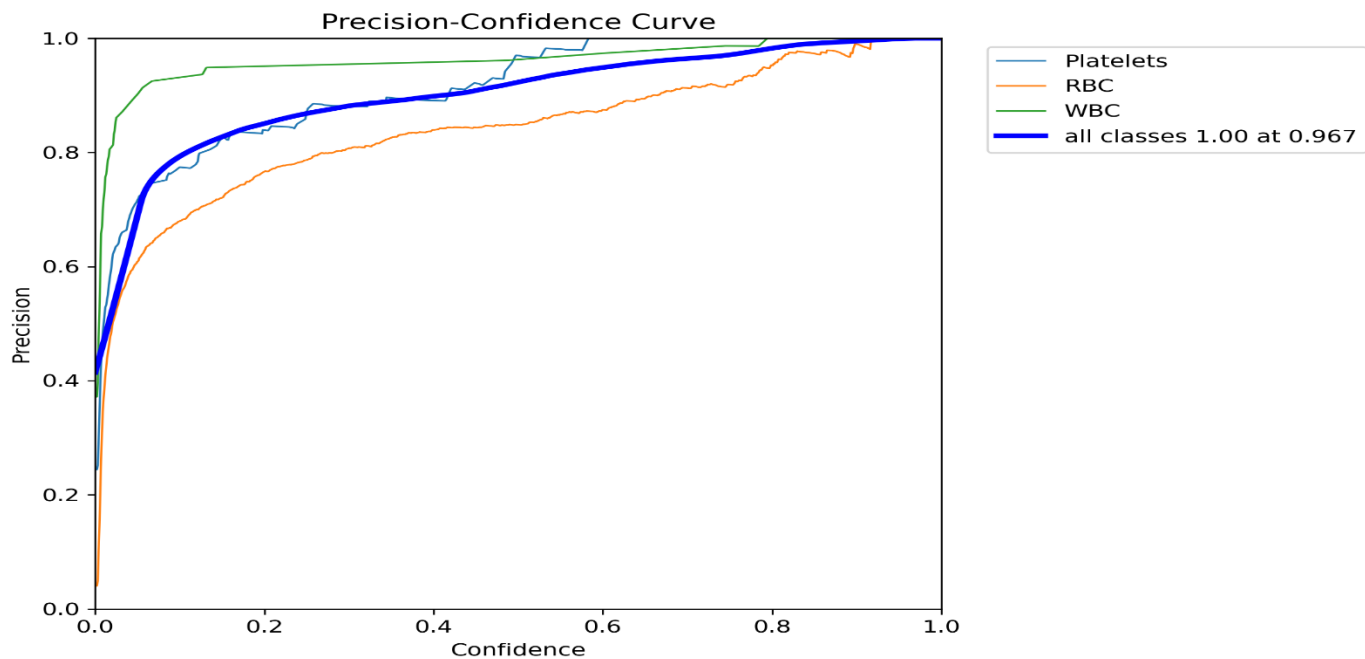
Table 1: Overall Performance

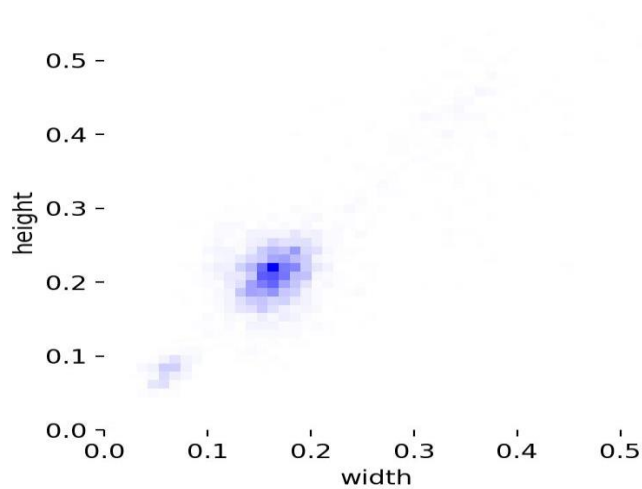
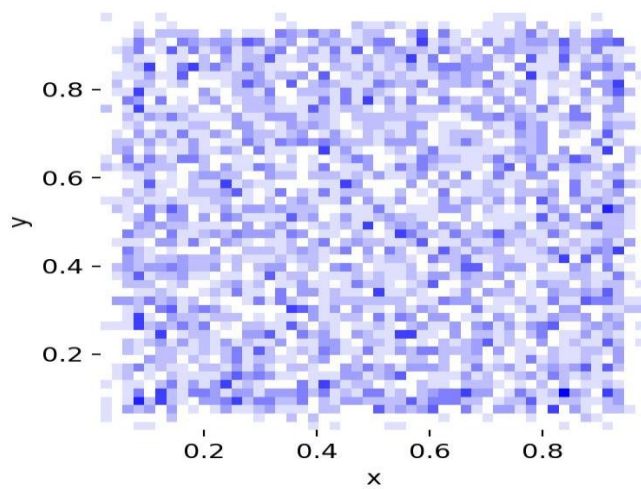
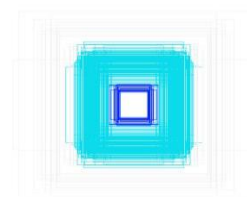
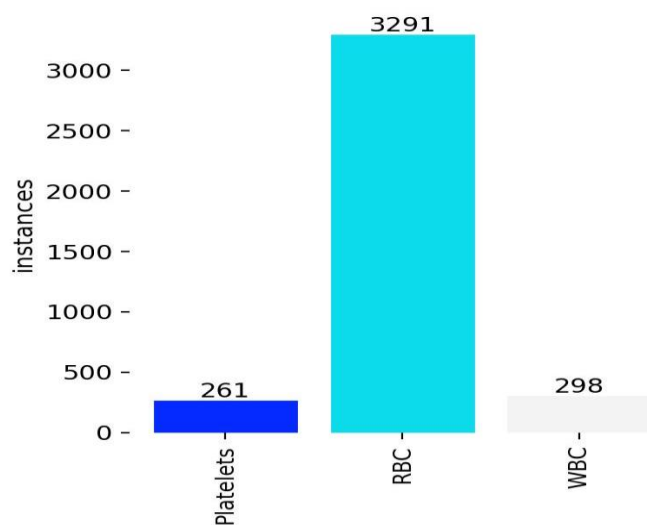
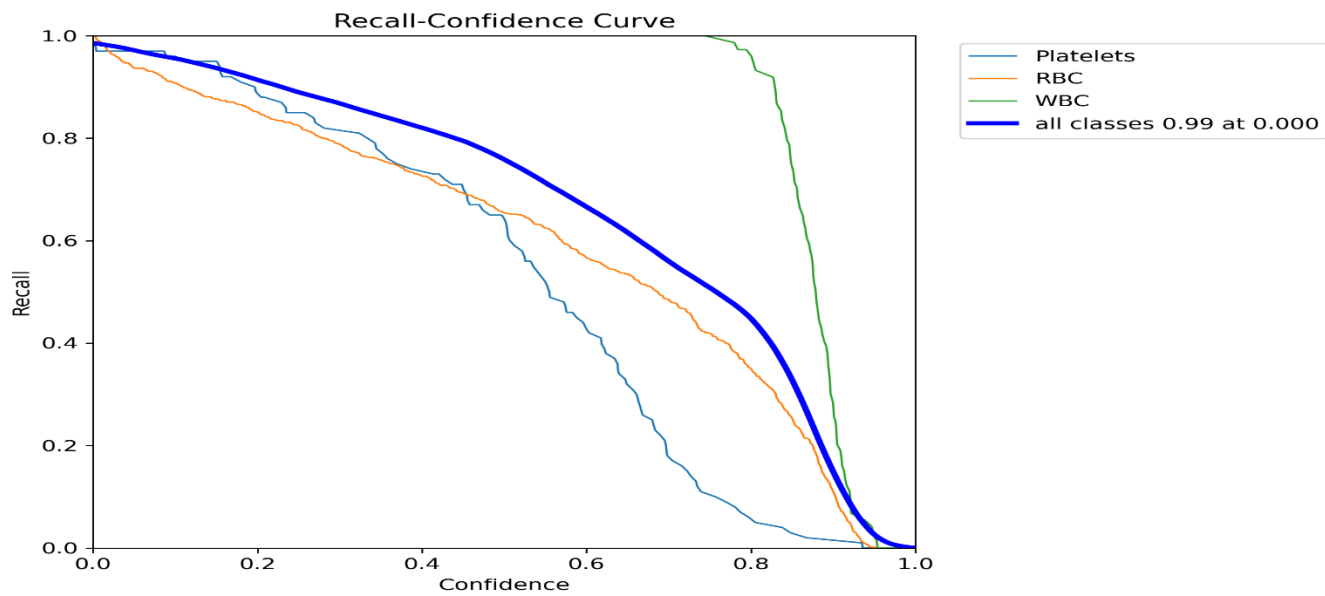
Metric	Value
mAP@0.5	0.9298
mAP@0.5:0.95	0.6396
Precision	0.8469
Recall	0.9217
F1-Score	0.8828

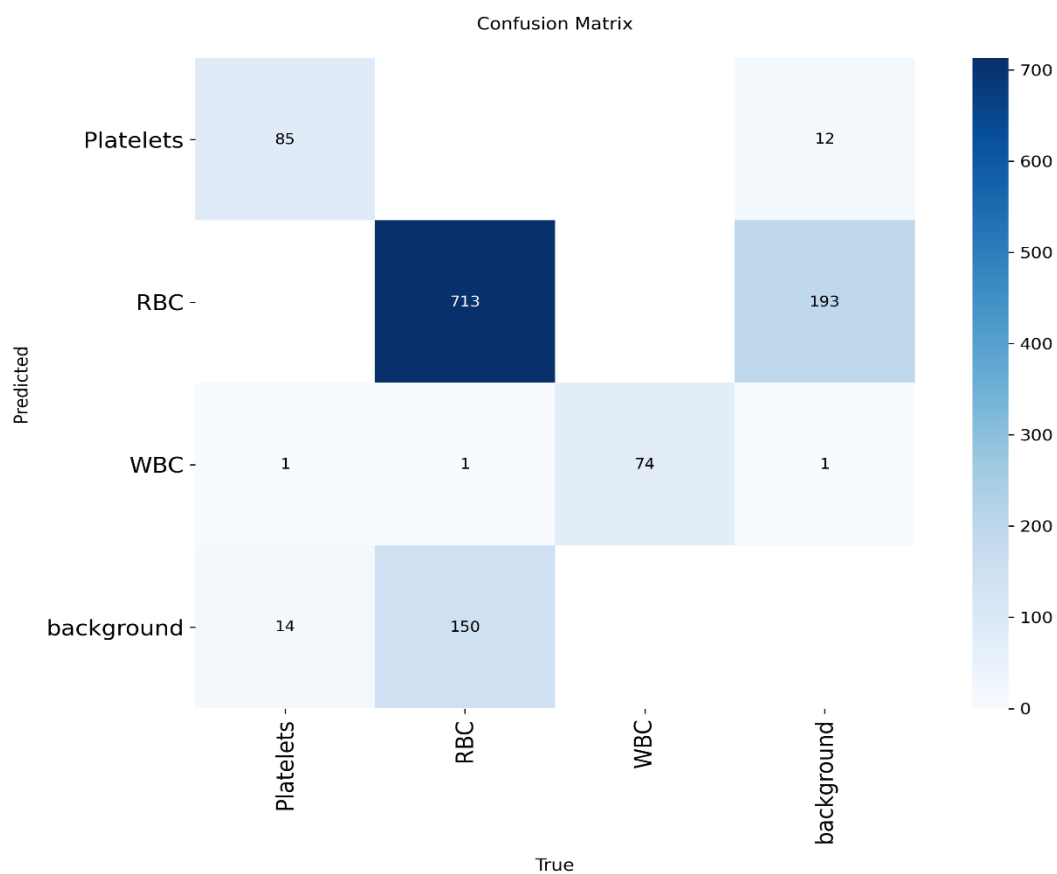
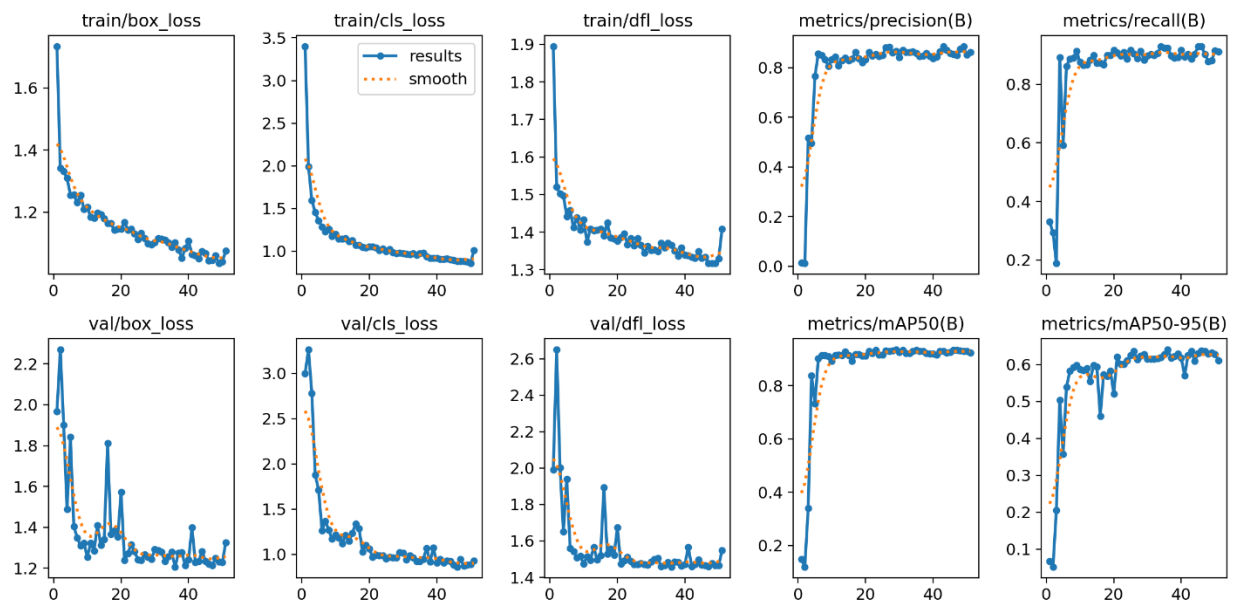
Table 2: Per-Class Performance

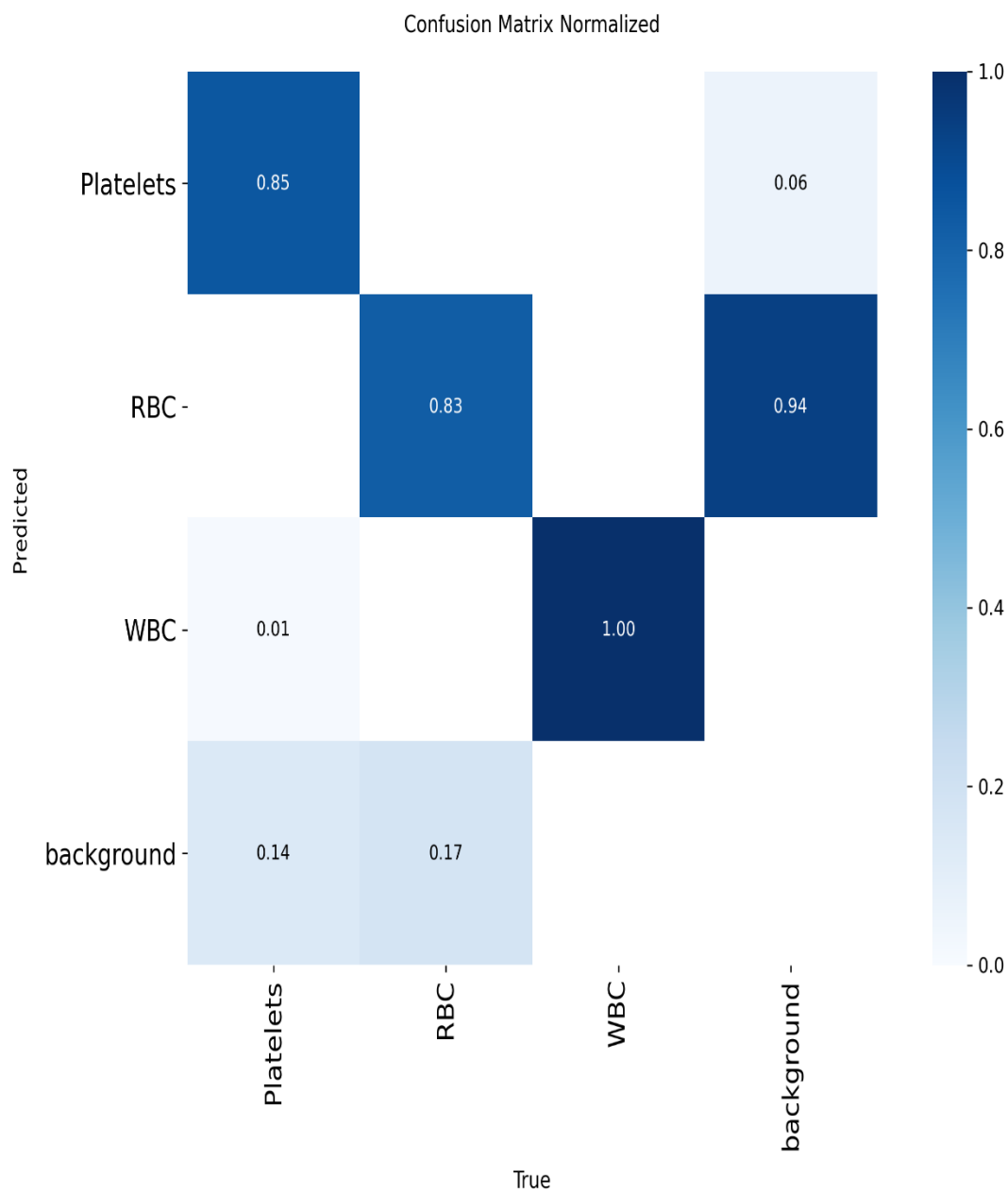
Class	mAP@0.5	mAP@0.5:0.95	Precision	Recall
WBC	0.9947	0.8068	0.9508	1.0000
Platelets	0.9268	0.5056	0.8339	0.9040
RBC	0.8678	0.6064	0.7560	0.8611

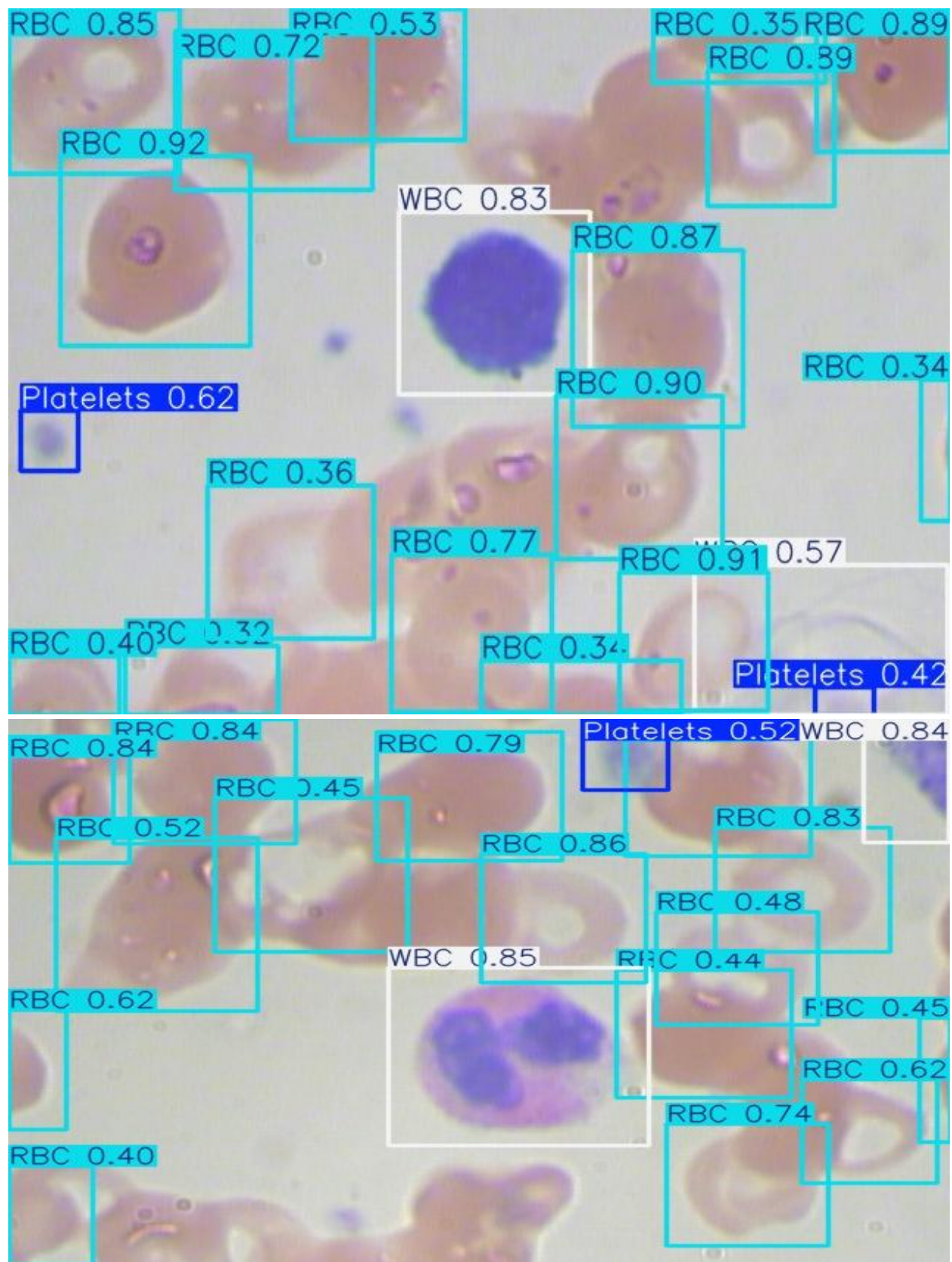


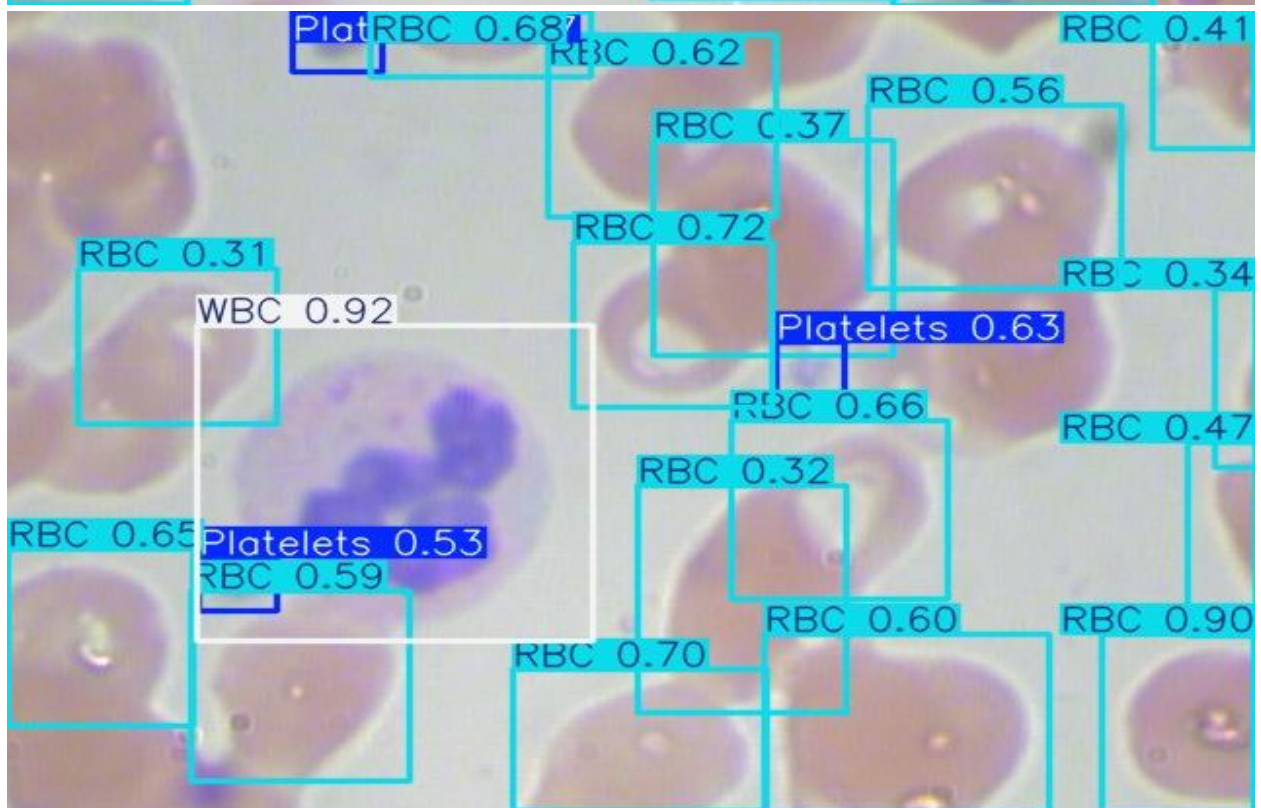
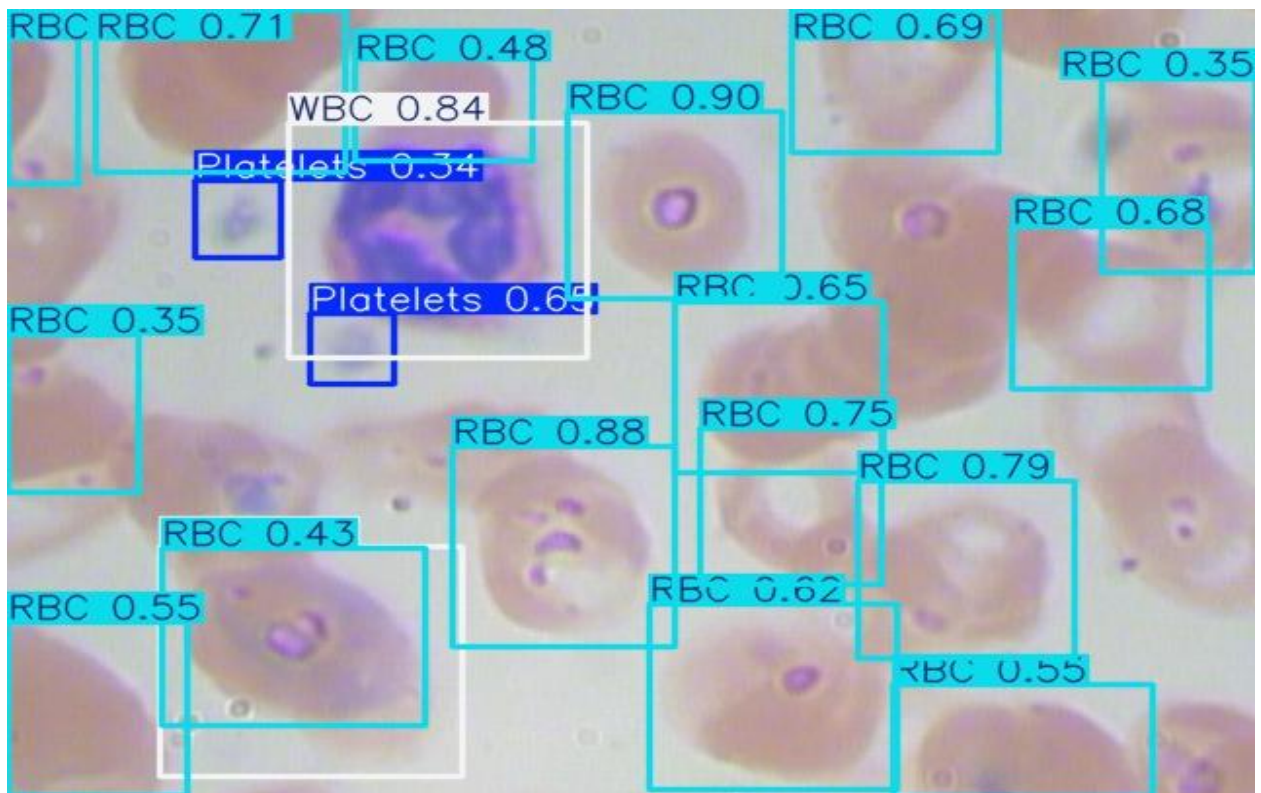


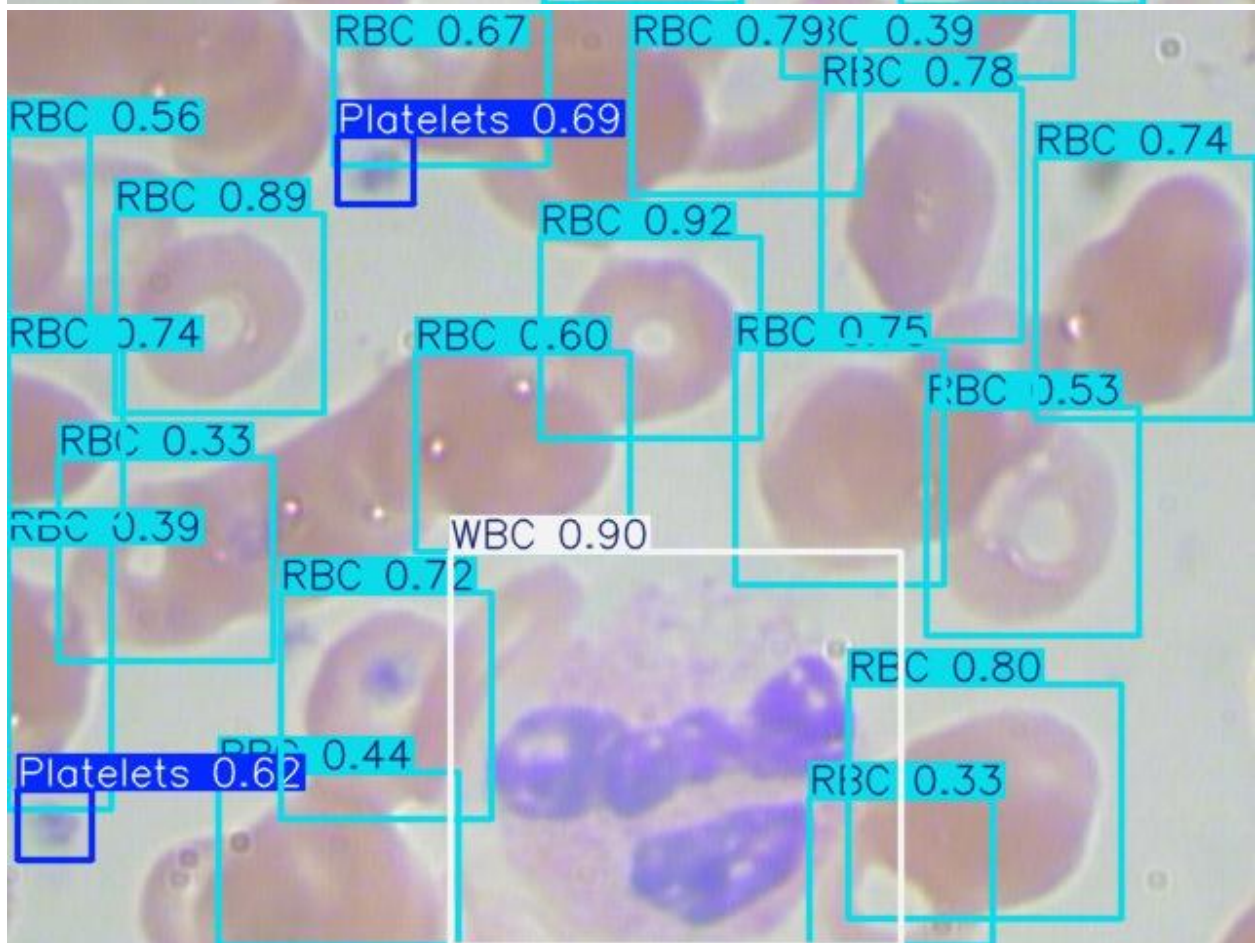
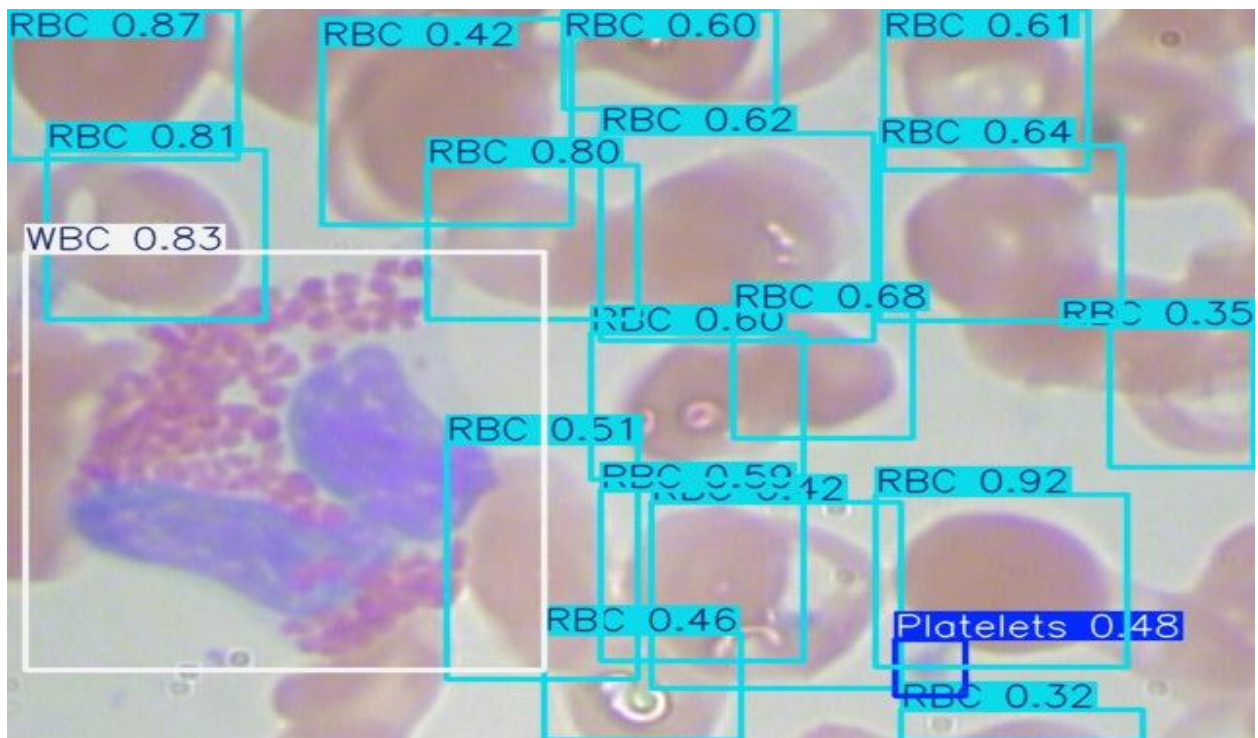


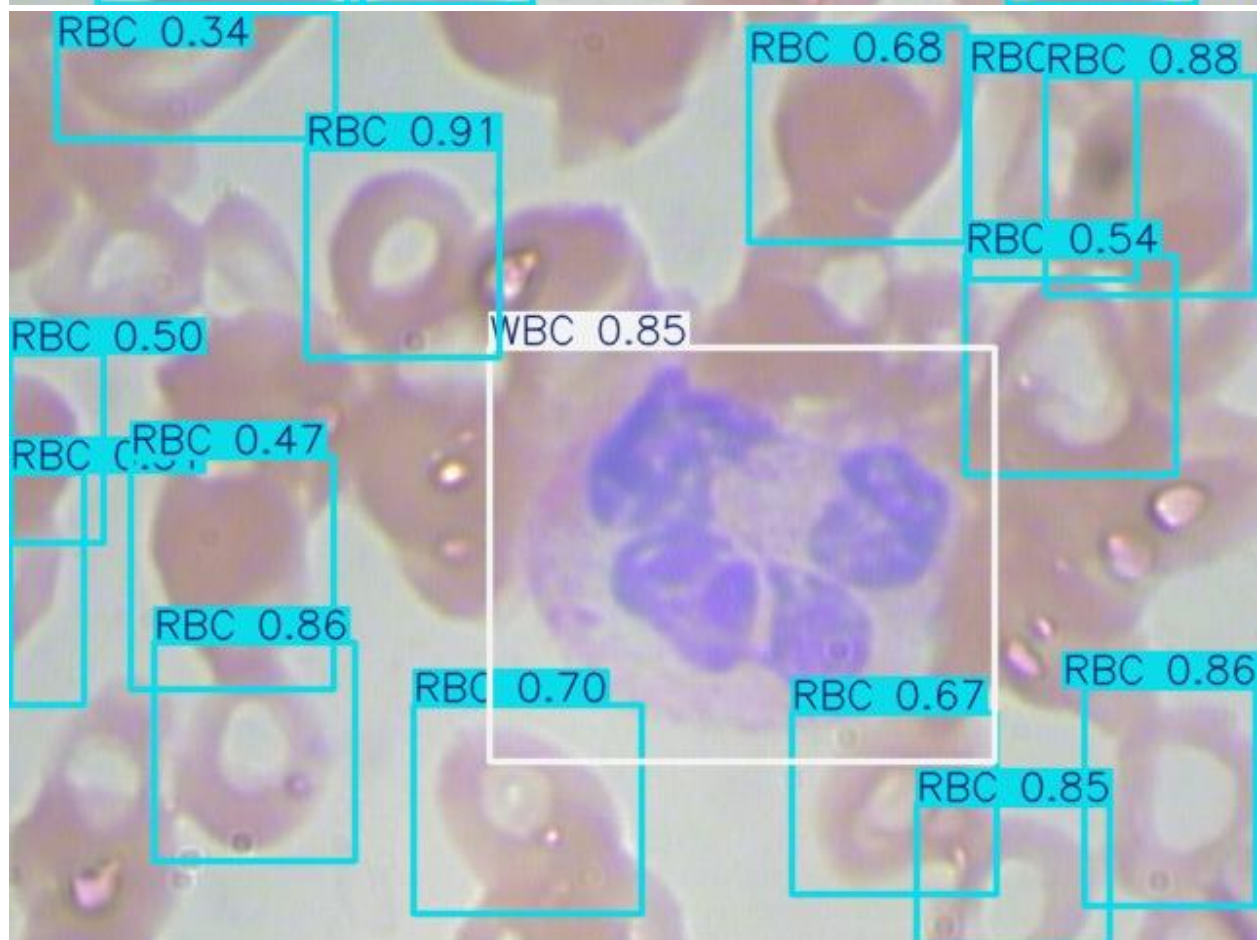
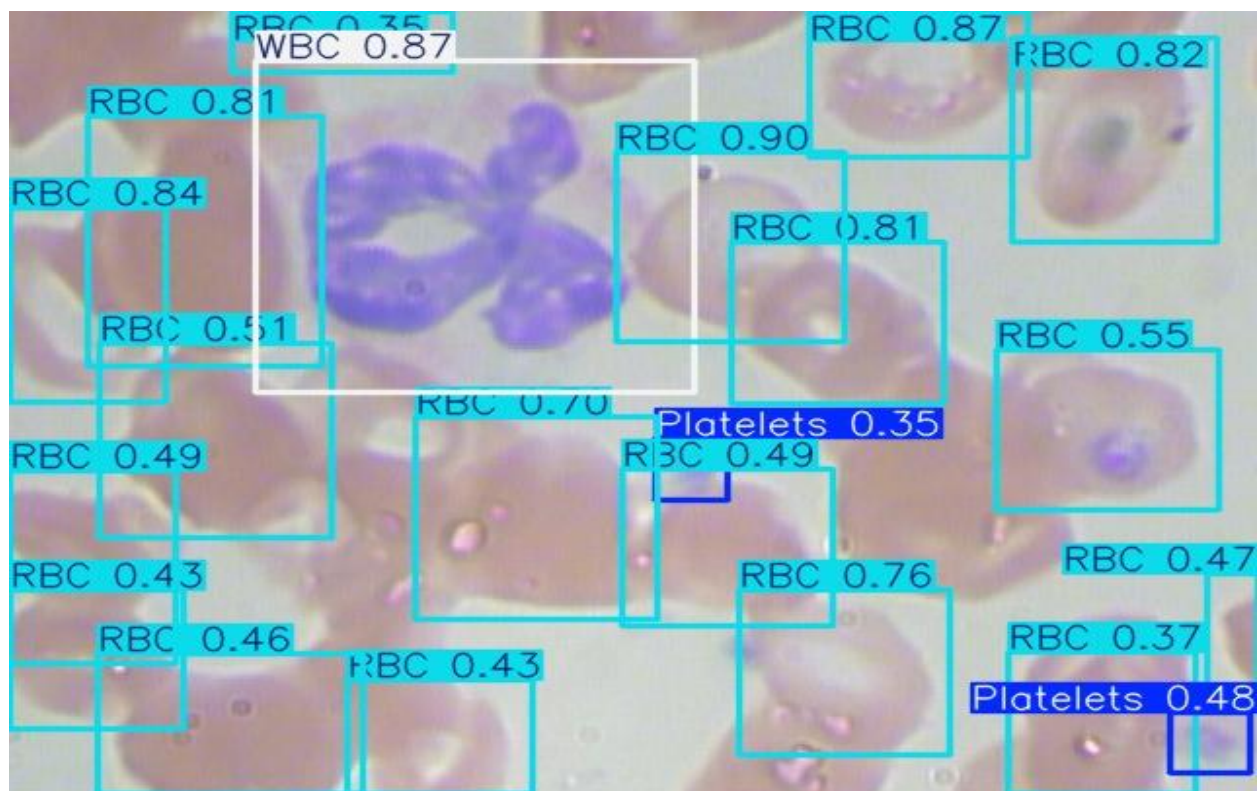












YOLO5

img /content/yolov5_dataset/labels/val.cache... 73 images, 0 backgrounds, 0 corrupt. 100% 73/73 147.9kIt/s 0.1

Class	Images	Instances	Box(P	R	mAP50	mAP50-95): 100%	5/5 1.91t/s 2.7s
all	73	1030	0.878	0.914	0.935	0.646	
Platelets	49	100	0.988	0.88	0.934	0.585	
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:

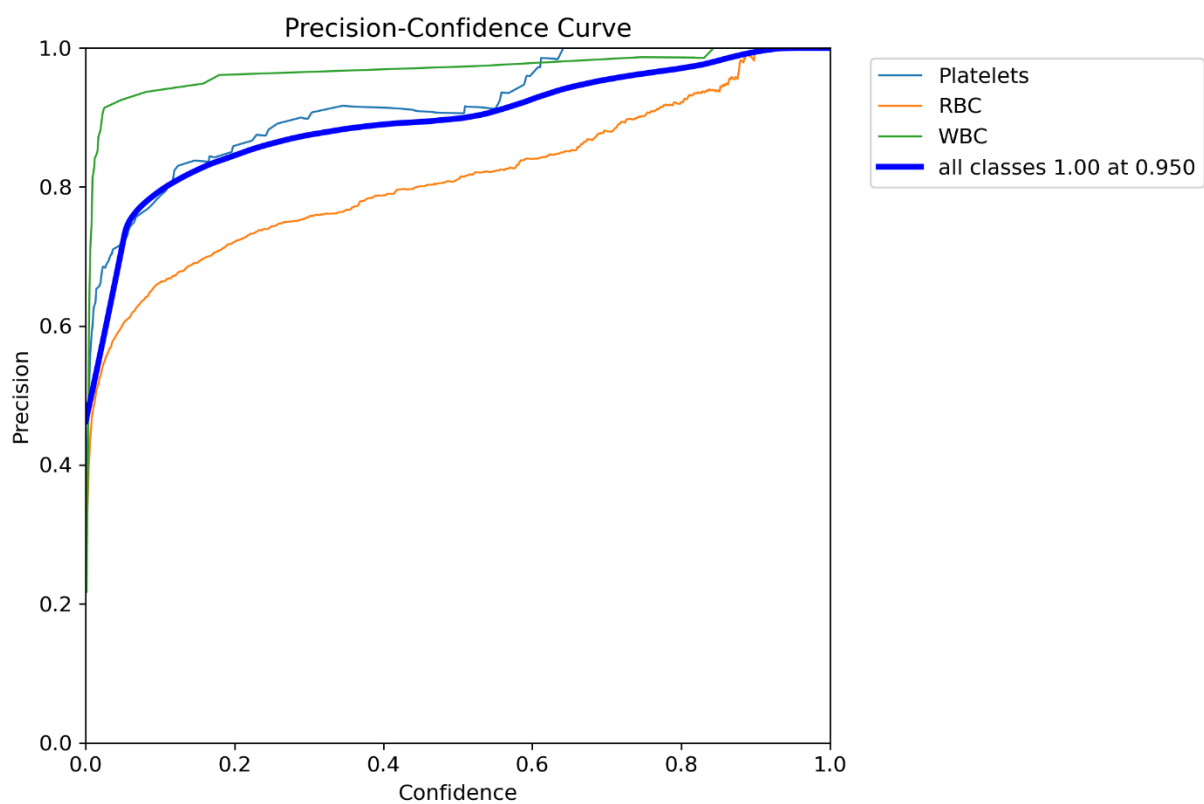
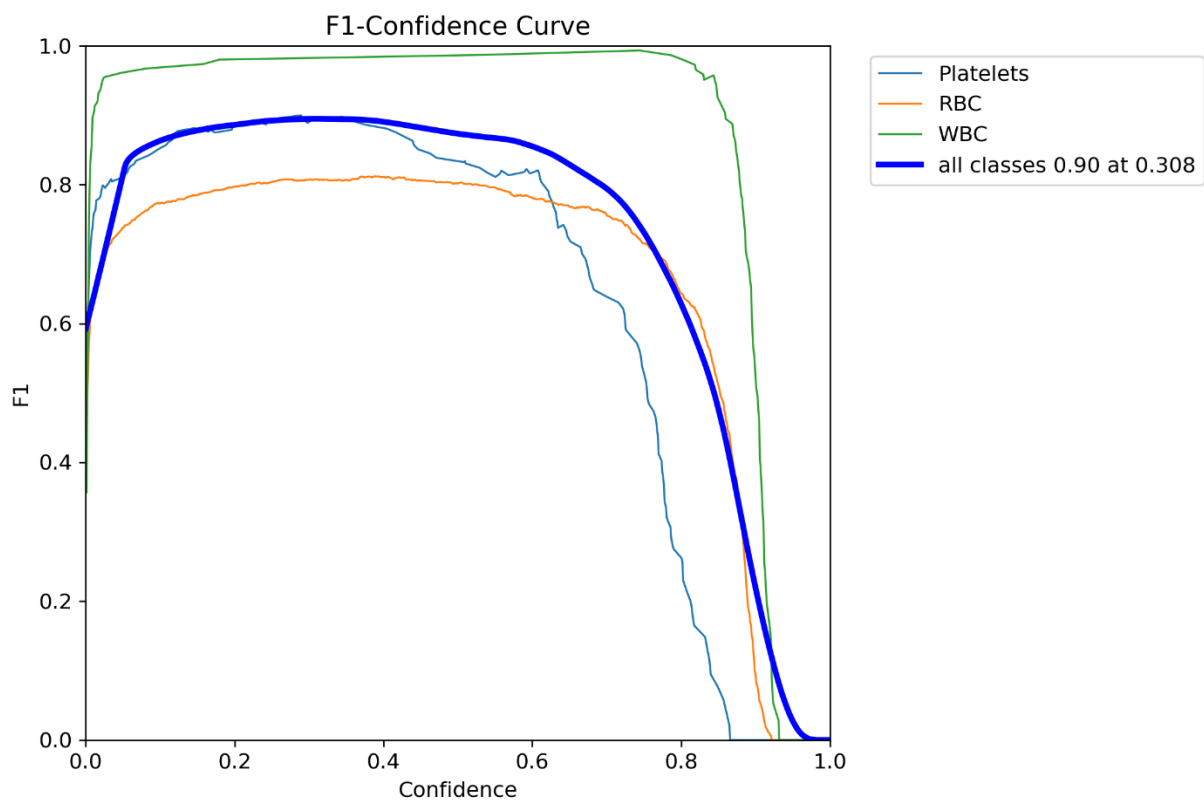
Precision:	0.9883
Recall:	0.8800
mAP@0.5:	0.9342
mAP@0.5:0.95:	0.5845

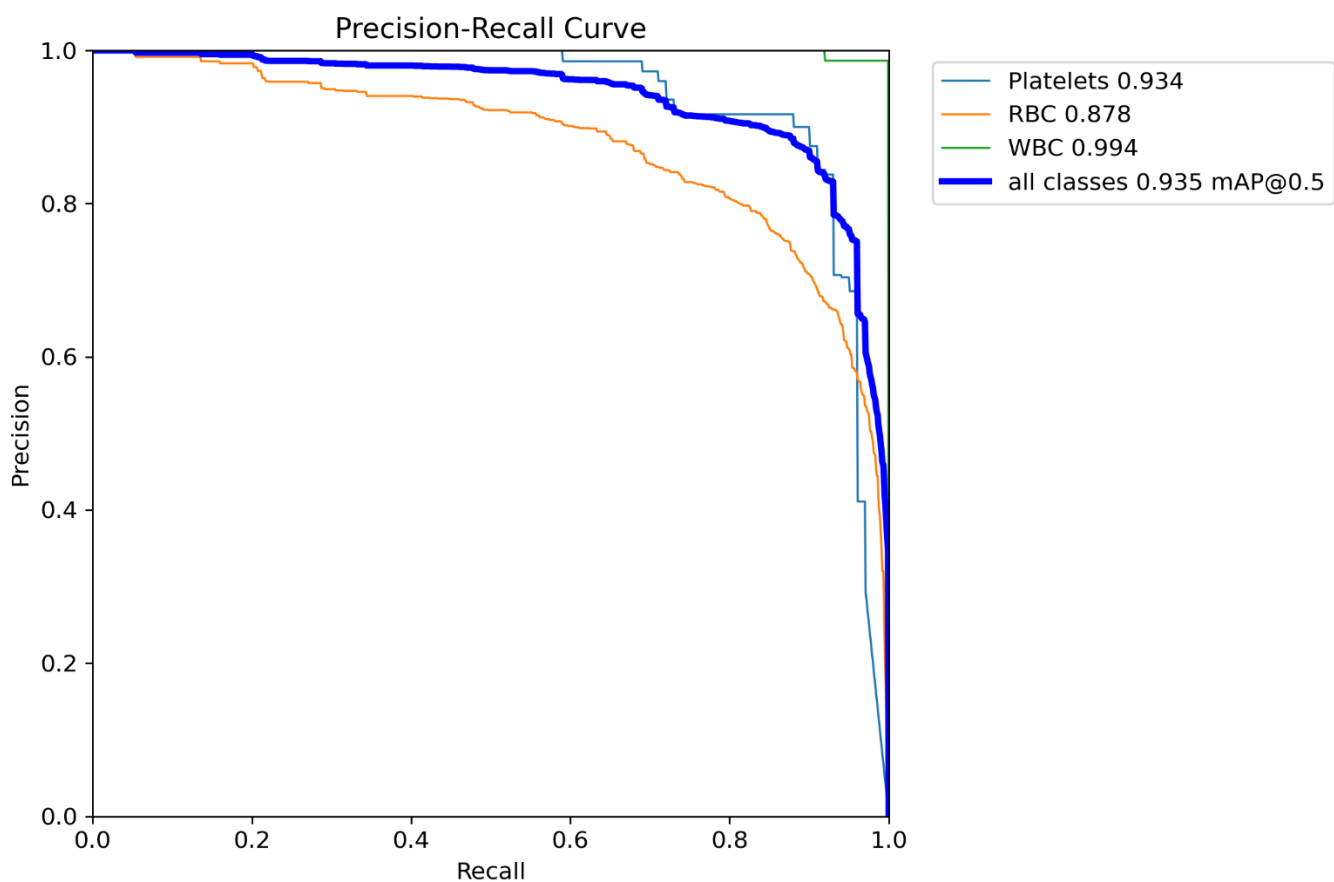
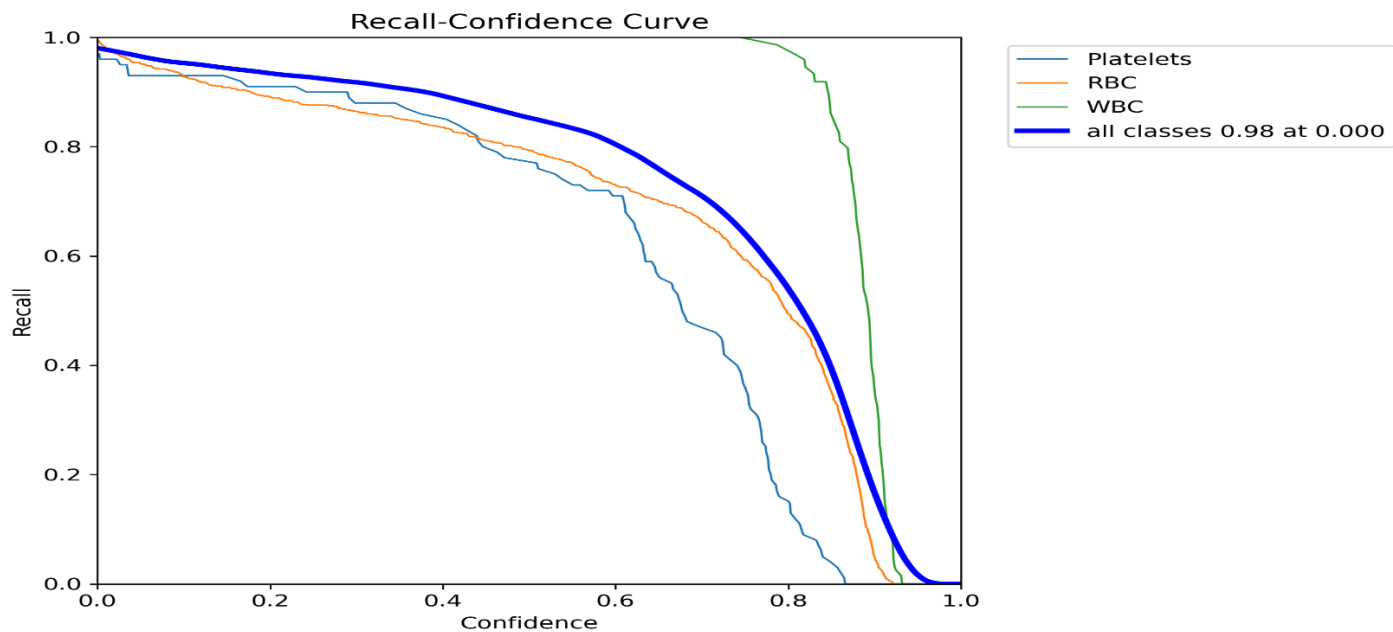
RBC:

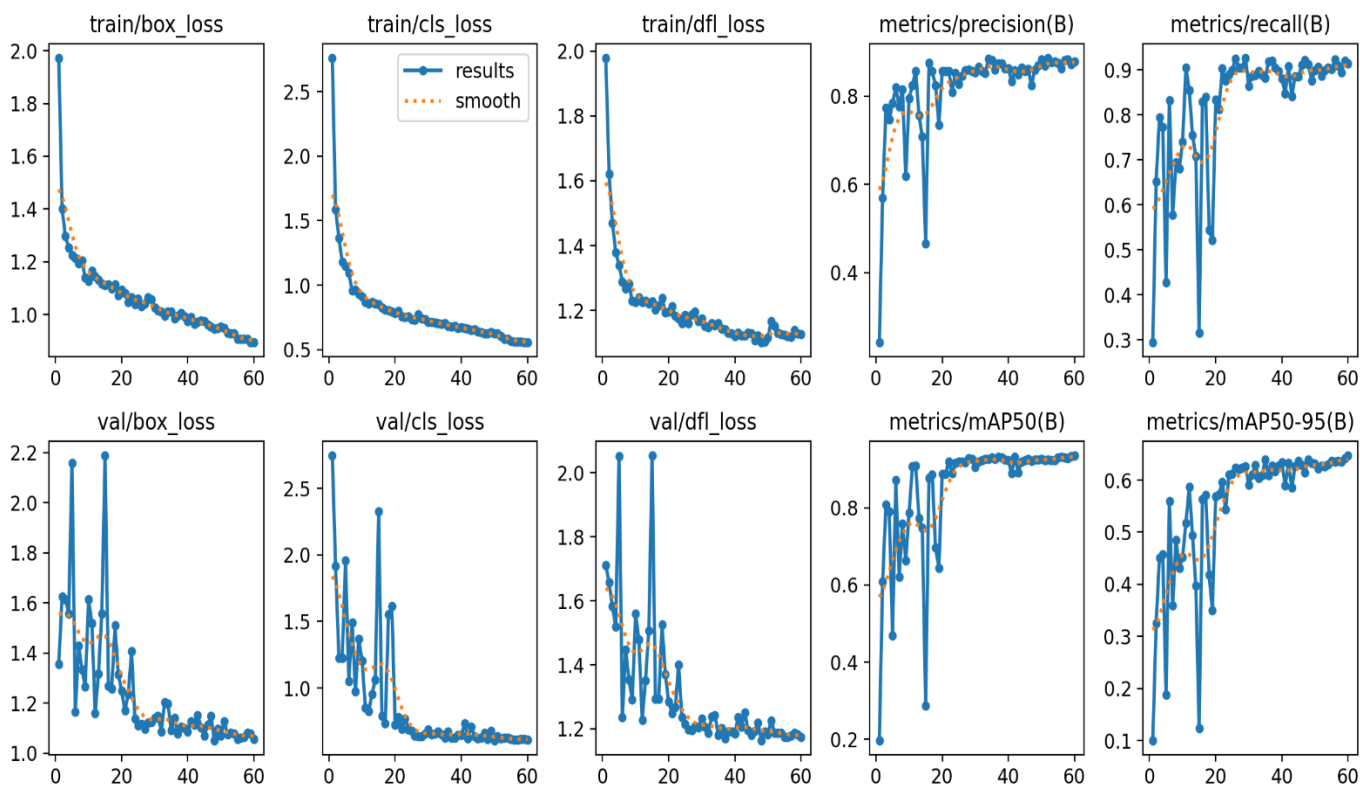
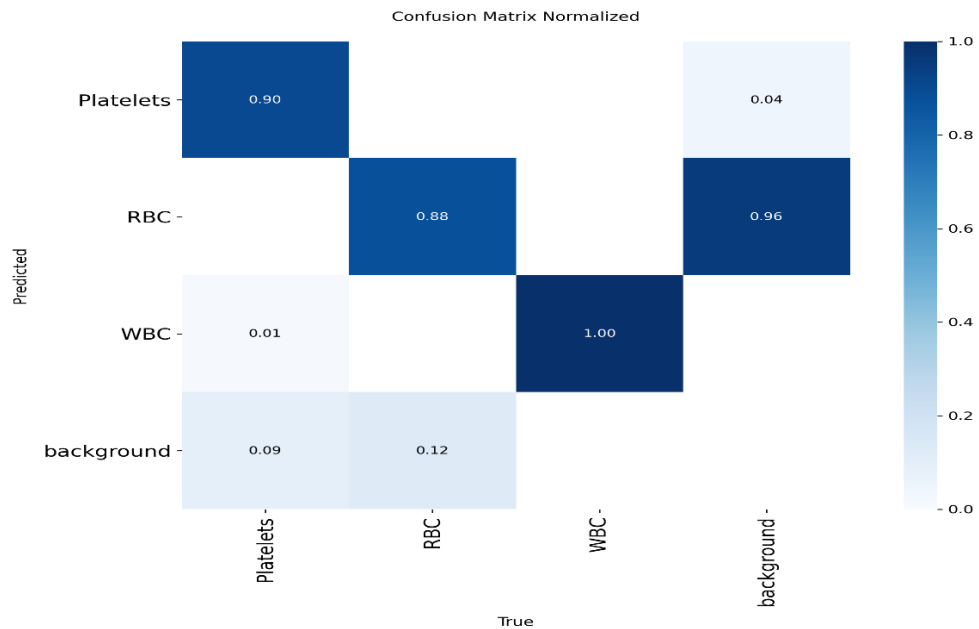
Precision:	0.7596
Recall:	0.8623
mAP@0.5:	0.8780
mAP@0.5:0.95:	0.6196

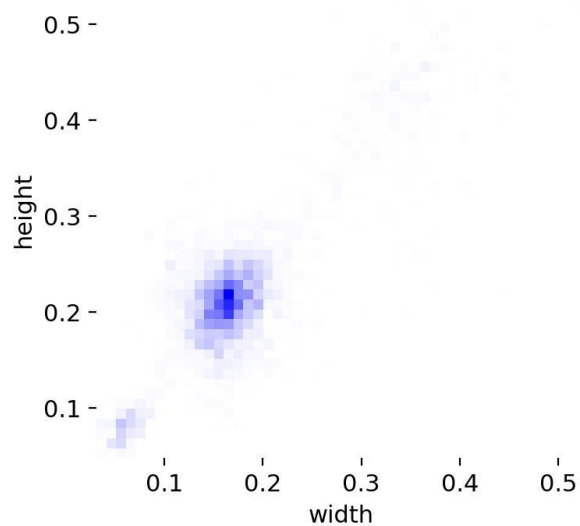
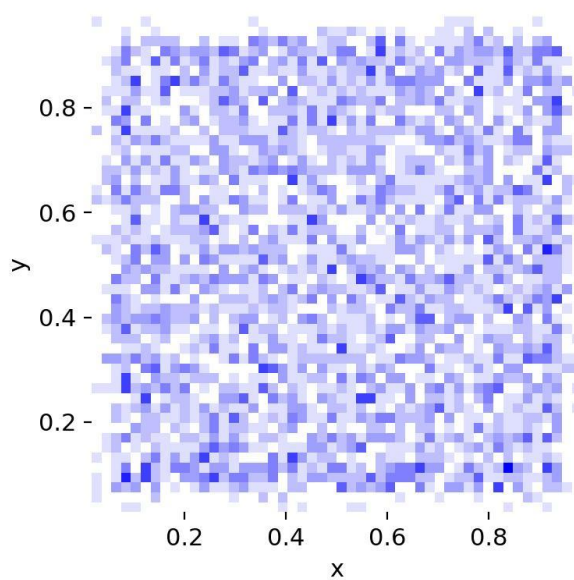
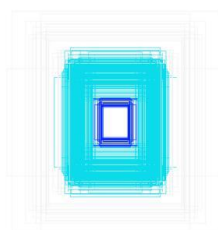
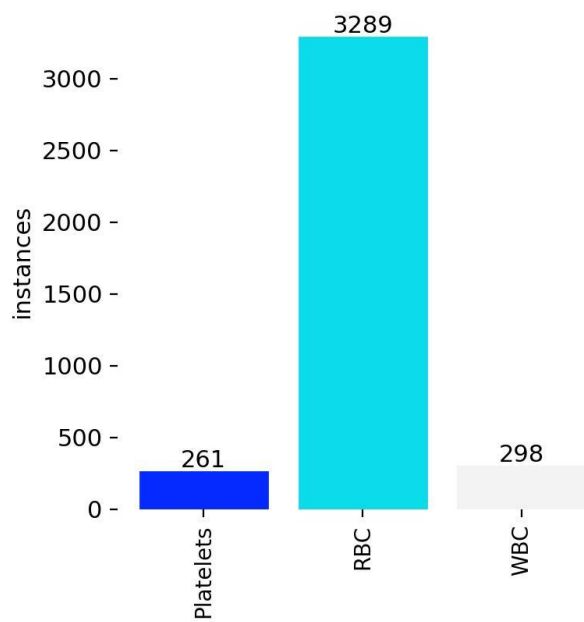
WBC:

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









YOLOv5 Blood Cell Predictions (Sample)

