

Druhy a počet prvků v rozhraní pro detekci	TEST_1_UI	6
	TEST_2_UI	18
	TEST_3_UI	21
	TEST_czupef	8
	CLK_PČ_DET	53
<b>DETR</b>	TP	5
resnet50 - 37,41%	FP	4
	FN	44
	CLK_PČ_DET	53
	Počty prvků v UI	53
	Precision	0.555555556
	Recall	0.102040816
	F1-score	0.172413793
F1-score (Avg.)	0.302913132	

	<b>38.48%</b>	Button
resnet50Dc5	TP	6
	FP	6
	FN	41
	CLK_PČ_DET	53
	Počty prvků v UI	53
	Precision	0.5
	Recall	0.127659574
	F1-score	0.203389831
F1-score (Avg.)	0.301449383	

	<b>39.93%</b>	Button
	TP	9
	FP	4
	FN	40
	CLK_PČ_DET	53

resnet101	Počty prvků v UI	53
	Precision	0.692307692
	Recall	0.183673469
	F1-score	0.290322581
	F1-score (Avg.)	0.322711747

resnet101Dc5	41.36%	Button
	TP	13
	FP	9
	FN	31
	CLK_PC_DET	53
	Počty prvků v UI	53
	Precision	0.590909091
	Recall	0.295454545
	F1-score	0.393939394
	F1-score (Avg.)	0.28687348

RetinaNet	14.39%	Button
	TP	5
	FP	7
	FN	41
	CLK_PČ_DET	53
	Počty prvků v UI	53
	Precision	0.416666667
	Recall	0.108695652
	F1-score	0.172413793
	F1-score (Avg.)	0.098709168

Faster R-CNN resnet50	71.94%	Button
	TP	38
	FP	12
	FN	3
	CLK_PČ_DET	53
	Počty prvků v UI	53
	Precision	0.76
	Recall	0.926829268
	F1-score	0.835164835
	F1-score (Avg.)	0.788953289

vgg16	42.09%	Button
	TP	26
	FP	11
	FN	16
	CLK_PČ_DET	53
	Počty prvků v UI	53
	Precision	0.702702703

Recall	0.619047619
F1-score	0.658227848
F1-score (Avg.)	0.498988592

<b>YOLOv8</b>	<b>34.89%</b>	Button
YOLOv8n	TP	33
	FP	10
	FN	10
	CLK_PČ_DET	53
	Počty prvků v UI	53
	Precision	0.76744186
	Recall	0.76744186
	F1-score	0.76744186
	F1-score (Avg.)	0.304504285

	<b>57.55%</b>	Button
YOLOv8s	TP	31
	FP	10
	FN	12
	CLK_PČ_DET	53
	Počty prvků v UI	53
	Precision	0.756097561
	Recall	0.720930233
	F1-score	0.738095238
	F1-score (Avg.)	0.504014939







Checkbox	dropdown	icon	input
0	2	14	1
0	0	62	10
3	3	15	10
0	1	10	1
3	6	101	22
0	0	35	12
0	2	3	0
3	4	63	10
3	6	101	22
3	6	101	22
0	0	0.921052632	1
0	0	0.357142857	0.545454545
0	0	0.514705882	0.705882353
Precision (Avg.)	0.555899553	Recall (Avg.)	0.216819094

Checkbox	dropdown	icon	input
0	0	40	11
0	3	3	5
3	3	58	6
3	6	101	22
3	6	101	22
0	0	0.930232558	0.6875
0	0	0.408163265	0.647058824
0	0	0.567375887	0.666666667
Precision (Avg.)	0.51471657	Recall (Avg.)	0.230562228

Checkbox	dropdown	icon	input
0	0	60	9
0	2	5	0
3	4	36	13
3	6	101	22

3	6	101	22
0	0	0.923076923	1
0	0	0.625	0.409090909
0	0	0.745341615	0.580645161
Precision (Avg.)		0.576923077	Recall (Avg.) 0.234291254

Checkbox	dropdown	icon	input
0	0	51	9
0	1	4	3
3	5	46	10
3	6	101	22
3	6	101	22
0	0	0.927272727	0.75
0	0	0.525773196	0.473684211
0	0	0.671052632	0.580645161
Precision (Avg.)		0.471022727	Recall (Avg.) 0.218411613

Checkbox	dropdown	icon	input
0	0	0	1
0	4	8	2
3	2	93	19
3	6	101	22
3	6	101	22
0	0	0	0.333333333
0	0	0	0.05
0	0	0	0.086956522
Precision (Avg.)		0.242559524	Recall (Avg.) 0.081375418

Checkbox	dropdown	icon	input
3	3	77	16
0	3	6	3
0	0	18	3
3	6	101	22
3	6	101	22
1	0.5	0.927710843	0.842105263
1	1	0.810526316	0.842105263
1	0.666666667	0.865168539	0.842105263
Precision (Avg.)		0.861113377	Recall (Avg.) 0.79361159

Checkbox	dropdown	icon	input
3	0	21	23
0	3	0	0
0	3	80	1
3	6	101	24
3	6	101	22
1	0	1	1

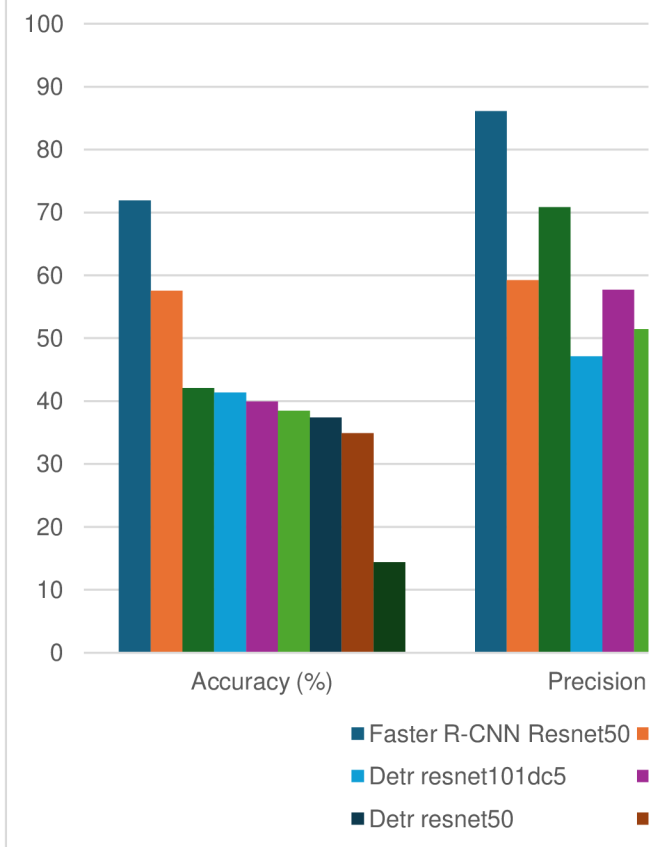


1	0	0.207920792	0.958333333
1	0	0.344262295	0.978723404
Precision (Avg.)		0.708671171	Recall (Avg.) 0.444809331

Checkbox	dropdown	icon	input
0	0	14	8
2	4	6	4
1	2	81	10
3	6	101	22
3	6	101	22
0	0	0.7	0.666666667
0	0	0.147368421	0.444444444
0	0	0.243478261	0.533333333
Precision (Avg.)		0.534471899	Recall (Avg.) 0.25164569

Checkbox	dropdown	icon	input
0	1	52	18
2	4	6	4
1	1	43	0
3	6	101	22
3	6	101	22
0	0.2	0.896551724	0.818181818
0	0.5	0.547368421	1
0	0.285714286	0.679738562	0.9
Precision (Avg.)		0.592187221	Recall (Avg.) 0.521794907

Sloupcový graf pro porovná







label	radio	switch
1	2	2
27	2	4
18	9	3
20	5	0
66	18	9
33	0	2
1	7	0
32	11	7
66	18	9
66	18	9
0.970588235	0	1
0.507692308	0	0.22222
0.666666667	0	0.36364

104  
0.374100719

label	radio	switch
29	0	2
0	2	0
37	16	7
66	18	9
66	18	9
1	0	1
0.439393939	0	0.22222
0.610526316	0	0.36364

107  
0.384892086

label	radio	switch
14	0	4
0	4	0
52	14	5
66	18	9

111  
0.399280576

66	18	9
1	0	1
0.212121212	0	0.444444
0.35	0	0.61538

label	radio	switch
11	0	2
0	10	2
55	8	5
66	18	9
66	18	9
1	0	0.5
0.166666667	0	0.28571
0.285714286	0	0.36364

115  
0.413669065

label	radio	switch
6	0	2
1	0	4
59	18	3
66	18	9
66	18	9
0.857142857	0	0.33333333
0.092307692	0	0.4
0.166666667	0	0.36363636

40  
0.143884892

label	radio	switch
19	10	8
1	1	0
46	7	1
66	18	9
66	18	9
0.95	0.909090909	1
0.292307692	0.588235294	0.8888889
0.447058824	0.714285714	0.9411765

200  
0.71942446

label	radio	switch
19	4	1
0	1	5
47	13	3
66	18	9
66	18	9
1	0.8	0.1666667

117  
0.420863309

0.287878788	0.235294118	0.25
0.447058824	0.363636364	0.2

label	radio	switch
7	2	3
1	1	2
58	15	4
66	18	9
66	18	9
0.875	0.666666667	0.6
0.107692308	0.117647059	0.4285714
0.191780822	0.2	0.5

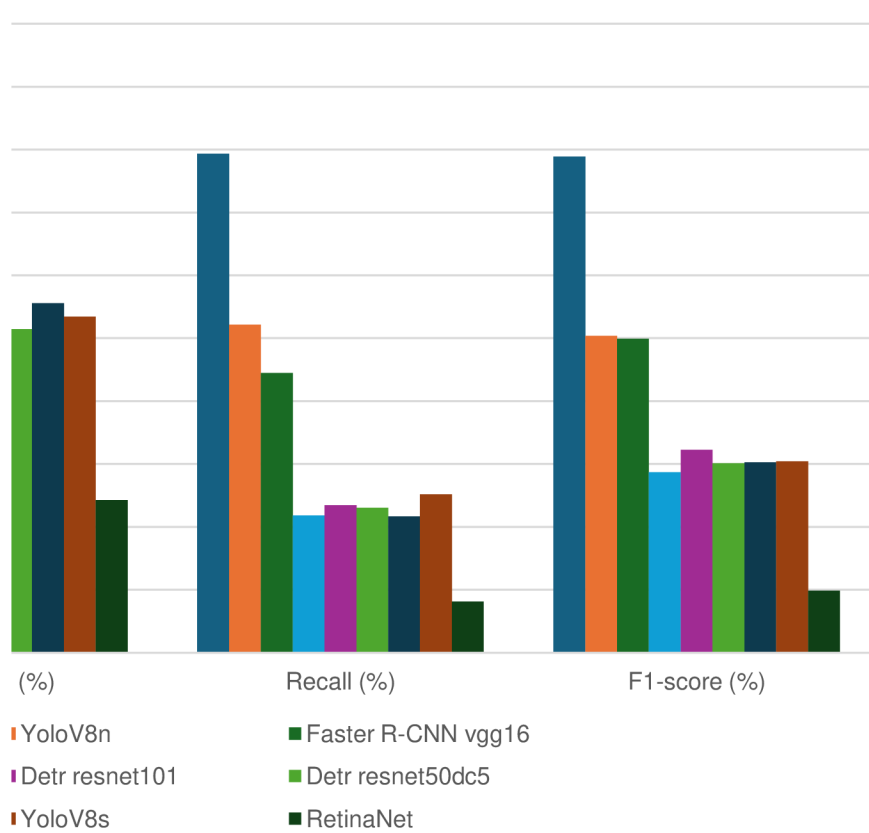
97  
0.348920863

label	radio	switch
18	2	6
0	3	3
48	13	0
66	18	9
66	18	9
1	0.4	0.6666667
0.272727273	0.133333333	1
0.428571429	0.2	0.8

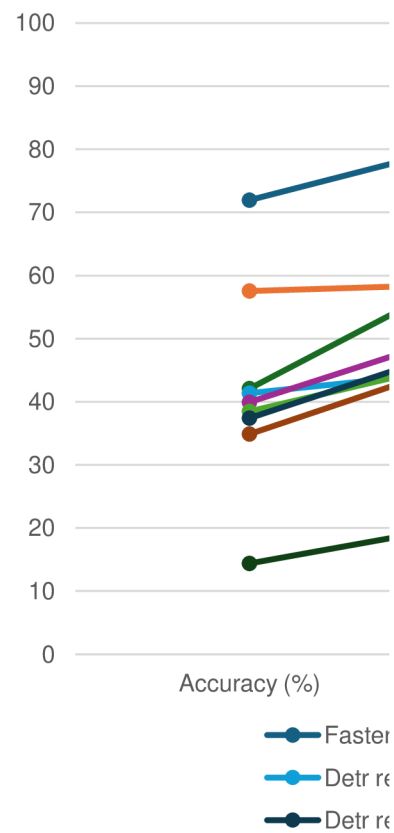
160  
0.575539568

Srovnání na základě Accuracy				
	Accuracy (%)	Precision (%)	Recall (%)	F1-score (%)
Faster R-CNN Resnet50	71.94	86.11	79.36	78.9
YoloV8n	57.55	59.22	52.18	50.4
Faster R-CNN vgg16	42.09	70.87	44.48	49.9
Detr resnet101dc5	41.36	47.1	21.84	28.69
Detr resnet101	39.93	57.69	23.43	32.27
Detr resnet50dc5	38.48	51.47	23.06	30.14
Detr resnet50	37.41	55.59	21.68	30.29
YoloV8s	34.89	53.45	25.16	30.45
RetinaNet	14.39	24.26	8.14	9.87

## Porovnání modelů na základě klasifikačních metrik



## Spojnicový graf







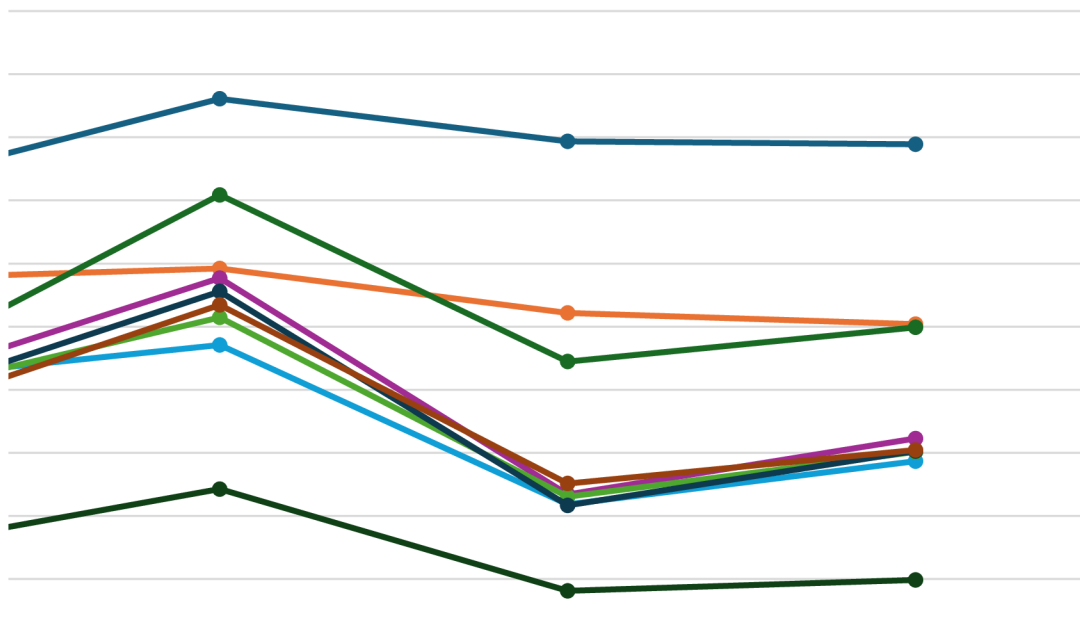








# Tabulka pro porovnání modelů na základě klasifikačních metrik



Legend for the chart:

- r R-CNN Resnet50
- esnet101dc5
- esnet50
- YoloV8n
- Detr resnet101
- YoloV8s
- Faster R-CNN vgg16
- Detr resnet50dc5
- RetinaNet









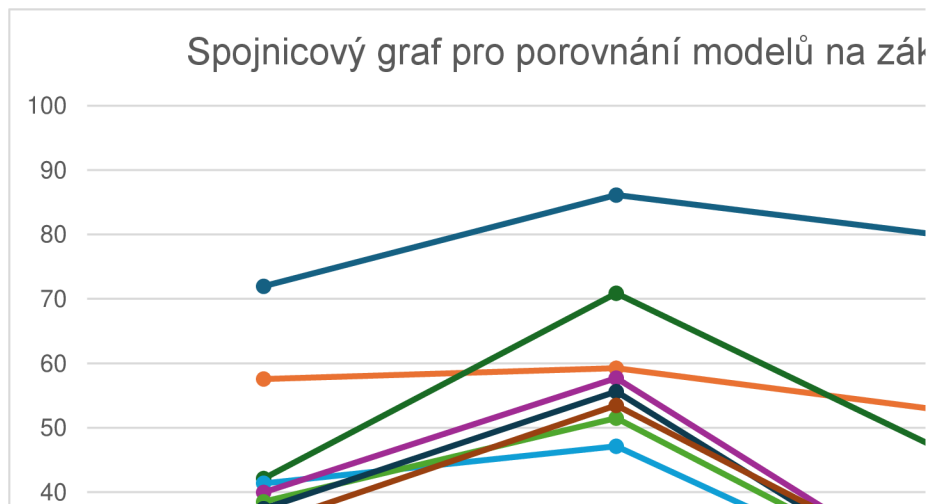


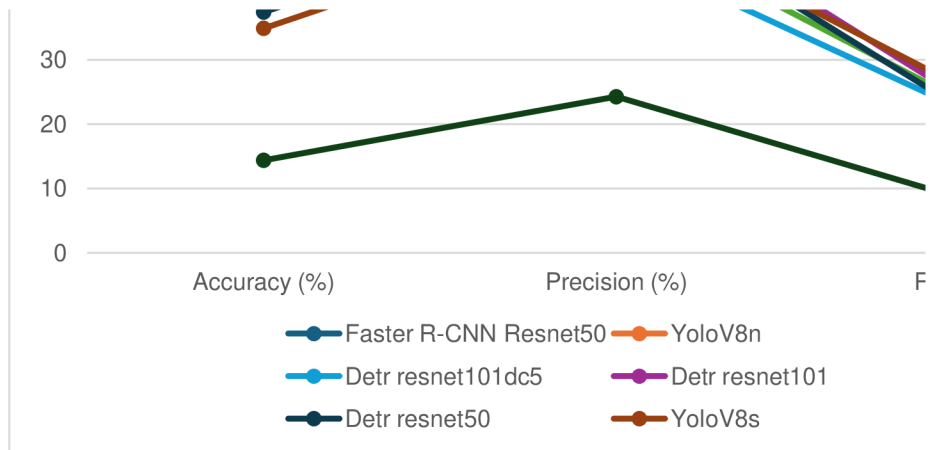


	Avg. Precision
Detr resnet50	0.555899553
Detr resnet50dc5	0.51471657
Detr resnet101	0.576923077
Detr resnet101dc5	0.471022727
RetinaNet	0.242559524
Faster R-CNN Resnet50	0.861113377
Faster R-CNN vgg16	0.708671171
YoloV8s	0.534471899
YoloV8n	0.592187221

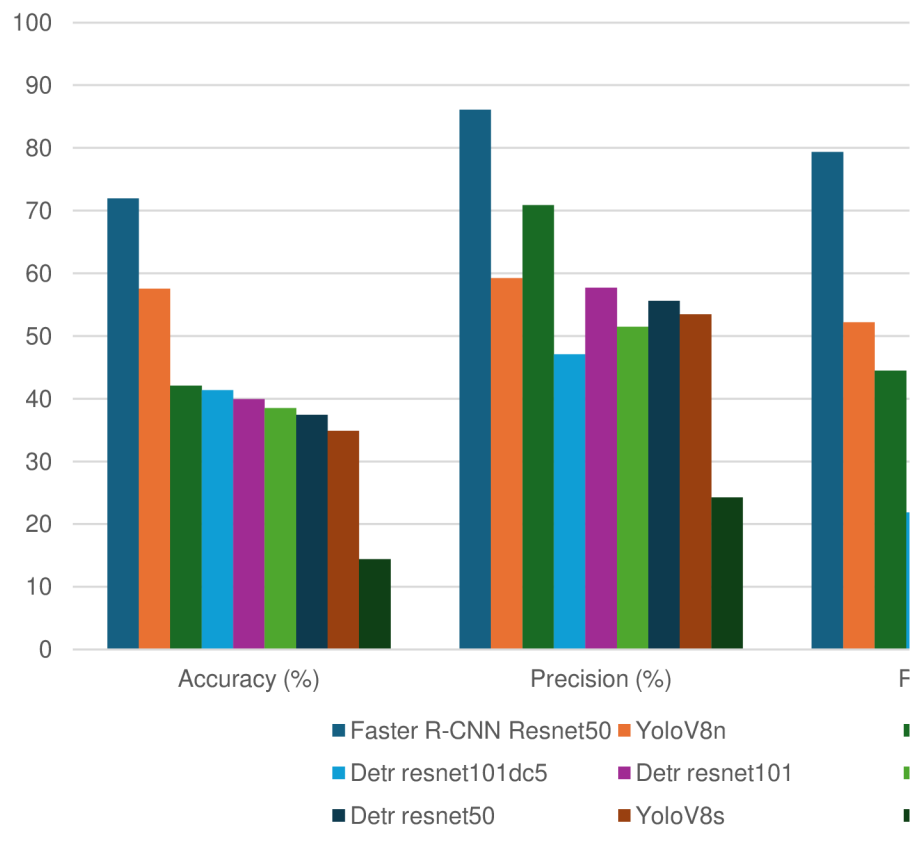
	Accuracy (%)	Precision (%)
Detr resnet50	37.41	55.58995528
Detr resnet50dc5	38.48	51.47165698
Detr resnet101	39.93	57.69230769
Detr resnet101dc5	41.36	47.10227273
RetinaNet	14.39	24.25595238
Faster R-CNN Resnet50	71.94	86.1113377
Faster R-CNN vgg16	42.09	70.86711712
YoloV8s	34.89	53.44718992
YoloV8n	57.55	59.21872212

Srovnání na základě Ac		
	Accuracy (%)	Precision (%)
Faster R-CNN Resnet50	71.94	86.11
YoloV8n	57.55	59.22
Faster R-CNN vgg16	42.09	70.87
Detr resnet101dc5	41.36	47.1
Detr resnet101	39.93	57.69
Detr resnet50dc5	38.48	51.47
Detr resnet50	37.41	55.59
YoloV8s	34.89	53.45
RetinaNet	14.39	24.26





Sloupcový graf pro porovnání modelů na zák

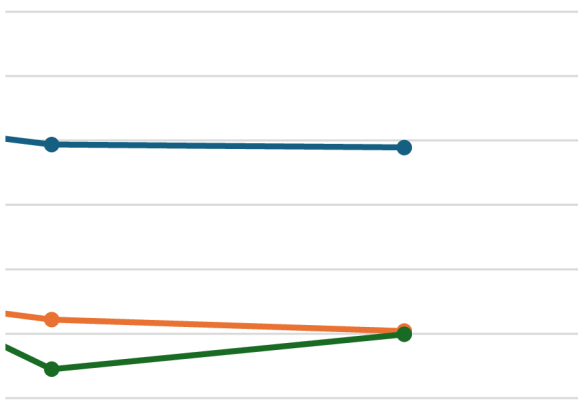


Avg. Recall	Avg. F1- Score
0.216819094	0.302913132
0.230562228	0.301449383
0.234291254	0.322711747
0.218411613	0.28687348
0.081375418	0.098709168
0.79361159	0.788953289
0.444809331	0.498988592
0.25164569	0.304504285
0.521794907	0.504014939

Recall (%)	F1-score (%)
21.68190936	30.29131323
23.05622281	30.14493829
23.42912544	32.27117465
21.8411613	28.68734795
8.137541806	9.870916814
79.36115903	78.89532891
44.48093312	49.89885918
25.16456901	30.45042846
52.17949075	50.40149393

curacy	
Recall (%)	F1-score (%)
79.36	78.9
52.18	50.4
44.48	49.9
21.84	28.69
23.43	32.27
23.06	30.14
21.68	30.29
25.16	30.45
8.14	9.87

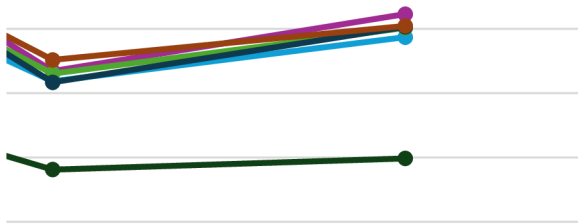
kladě klasifikačních metrik



Srovnání na základě	
	Accuracy (%)
1. Faster R-CNN Resnet50	71.94
2. YoloV8n	57.55
3. Faster R-CNN vgg16	42.09
4. Detr resnet101dc5	41.36
5. Detr resnet101	39.93
6. Detr resnet50dc5	38.48
7. Detr resnet50	37.41
8. YoloV8s	34.89
9. RetinaNet	14.39

Srovnání na základě	
	Accuracy (%)
1. Faster R-CNN resnet50	71.94
2. Faster R-CNN vgg16	42.09
3. YOLOv8n	57.55
4. DETR resnet101	39.93
5. DETR resnet50	37.41
6. YOLOv8s	34.89
7. DETR resnet50dc5	38.48
8. DETR resnet101dc5	41.36
9. RetinaNet	14.39

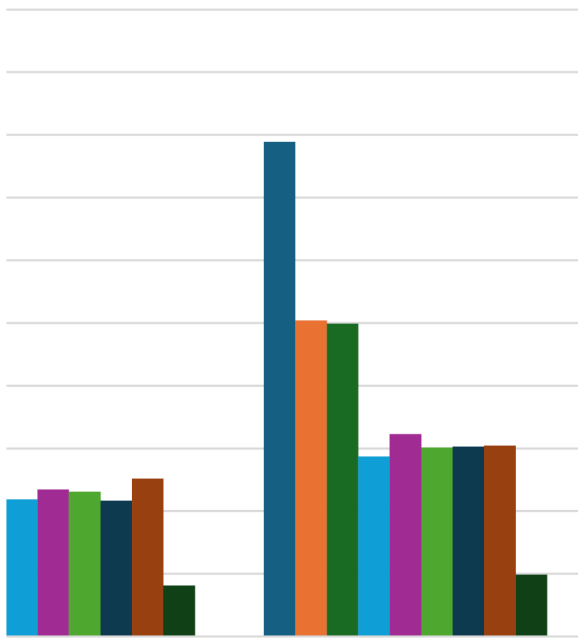
Srovnání na základě	
	Accuracy (%)
1. Faster R-CNN resnet50	71.94
2. YOLOv8n	57.55
3. Faster R-CNN vgg16	42.09
4. YOLOv8s	34.89



Recall (%) F1-score (%)

- Faster R-CNN vgg16
- Detr resnet50dc5
- RetinaNet

### řadě klasifikačních metrik



Recall (%) F1-score (%)

- Faster R-CNN vgg16
- Detr resnet50dc5
- RetinaNet

5.	DETR resnet101	39.93
6.	DETR resnet50dc5	38.48
7.	DETR resnet101dc5	41.36
8.	DETR resnet50	37.41
9.	RetinaNet	14.39

Srovnání na z		
	Accuracy (%)	
1.	Faster R-CNN resnet50	71.94
2.	YOLOv8n	57.55
3.	Faster R-CNN vgg16	42.09
4.	DETR resnet101	39.93
5.	YOLOv8s	34.89
6.	DETR resnet50	37.41
7.	DETR resnet50dc5	38.48
8.	DETR resnet101dc5	41.36
9.	RetinaNet	14.39

	Výsledné pořadí	skóre
1.	Faster R-CNN resnet50	4
2.	YOLOv8n	9
3.	Faster R-CNN vgg16	11
4.	DETR resnet101	18
5.	YOLOv8s	23
6.	DETR resnet50	26
6.	DETR resnet50dc5	26
8.	DETR resnet101dc5	27
9.	RetinaNet	36

základě Accuracy		
Precision (%)	Recall (%)	F1-score (%)
86.1113377	79.361159	78.89532891
59.21872212	52.179491	50.40149393
70.86711712	44.480933	49.89885918
47.10227273	21.841161	28.68734795
57.69230769	23.429125	32.27117465
51.47165698	23.056223	30.14493829
55.58995528	21.681909	30.29131323
53.44718992	25.164569	30.45042846
24.25595238	8.1375418	9.870916814

základě Precision		
Precision (%)	Recall (%)	F1-score (%)
86.1113377	79.361159	78.89532891
70.86711712	44.480933	49.89885918
59.21872212	52.179491	50.40149393
57.69230769	23.429125	32.27117465
55.58995528	21.681909	30.29131323
53.44718992	25.164569	30.45042846
51.47165698	23.056223	30.14493829
47.10227273	21.841161	28.68734795
24.25595238	8.1375418	9.870916814

základě Recall		
Precision (%)	Recall (%)	F1-score (%)
86.1113377	79.361159	78.89532891
59.21872212	52.179491	50.40149393
70.86711712	44.480933	49.89885918
53.44718992	25.164569	30.45042846



57.69230769	23.429125	32.27117465
51.47165698	23.056223	30.14493829
47.10227273	21.841161	28.68734795
55.58995528	21.681909	30.29131323
24.25595238	8.1375418	9.870916814

ákladě F1-score		
Precision (%)	Recall (%)	F1-score (%)
86.1113377	79.361159	78.89532891
59.21872212	52.179491	50.40149393
70.86711712	44.480933	49.89885918
57.69230769	23.429125	32.27117465
53.44718992	25.164569	30.45042846
55.58995528	21.681909	30.29131323
51.47165698	23.056223	30.14493829
47.10227273	21.841161	28.68734795
24.25595238	8.1375418	9.870916814