```
1 C:\Users\hilmi\AppData\Local\Programs\Python\Python312\python.exe D:\Projects\Code\python-projects\yolo-gfl\test\test.py
2 STARTING COMPREHENSIVE MODEL EVALUATION
3 Data config: ../dataset/HOME-FIRE/data.yaml
4 Test images: ../dataset/HOME-FIRE/test/images
5 Models to evaluate: 2
6
7 Evaluating Model: YOLOv12
8 Model Info:
9 YOLOv12 summary: 272 layers, 2,538,486 parameters, 0 gradients, 6.0 GFLOPs
10 (272, 2538486, 0, 6.0090368)
11 Model Size: 5.21 MB
12
13 Standard Ultralytics Evaluation
14 Ultralytics 8.3.157  Python-3.12.10 torch-2.6.0+cu126 CUDA:0 (NVIDIA GeForce RTX 4060 Laptop GPU, 8188MiB)
15 YOLOv12 summary (fused): 159 layers, 2,527,166 parameters, 0 gradients, 5.8 GFLOPs
16 val: Fast image access  (ping: 0.10.0 ms, read: 1460.8606.0 MB/s, size: 248.4 KB)
17 val: Scanning D:\Projects\Code\python-projects\yolo-gfl\dataset\HOME-FIRE\val\labels.cache... 1300 images, 33 backgrounds, 0 corrupt: 100%|          |
   1300/1300 [00:00<?, ?it/s]
18                 Class     Images  Instances      Box(P          R      mAP50  mAP50-95): 100%|          | 82/82 [00:08<00:00,  9.73it/s]
19                   all       1300       1580       0.93      0.888      0.933      0.642
20                  Fire        894        963      0.957      0.921      0.955      0.695
21                 Smoke        574        617      0.902      0.854      0.911      0.589
22 Speed: 0.2ms preprocess, 2.1ms inference, 0.0ms loss, 1.0ms postprocess per image
23 Saving runs\evaluation\YOLOv12\predictions.json...
24 Results saved to runs\evaluation\YOLOv12
25 Ultralytics evaluation completed in 30.75 seconds
26
27 Real-world Performance Analysis
28 Calculating real-world performance metrics...
29 Found 1300 test images
30 Warming up model...
31 Measuring inference performance...
32 Processing images: 100%|          | 1300/1300 [00:36<00:00, 35.45it/s]
33   Processed 1300 images
34   Average inference time: 17.77 ms
35   FPS: 56.27
36
37 Evaluating Model: YOLO-GFL
38 Model Info:
39 YOLO-gfl summary: 198 layers, 1,616,270 parameters, 0 gradients, 4.7 GFLOPs
40 (198, 1616270, 0, 4.7103232)
41 Model Size: 3.36 MB
42
43 Standard Ultralytics Evaluation
44 Ultralytics 8.3.157  Python-3.12.10 torch-2.6.0+cu126 CUDA:0 (NVIDIA GeForce RTX 4060 Laptop GPU, 8188MiB)
45 YOLO-gfl summary (fused): 118 layers, 1,611,126 parameters, 0 gradients, 4.6 GFLOPs
46 val: Fast image access  (ping: 0.10.0 ms, read: 1500.1631.4 MB/s, size: 272.7 KB)
47 val: Scanning D:\Projects\Code\python-projects\yolo-gfl\dataset\HOME-FIRE\val\labels.cache... 1300 images, 33 backgrounds, 0 corrupt: 100%|          |
   1300/1300 [00:00<?, ?it/s]
48                 Class     Images  Instances      Box(P          R      mAP50  mAP50-95): 100%|          | 82/82 [00:08<00:00, 10.14it/s]
49                   all       1300       1580      0.941      0.892      0.933      0.621
50                  Fire        894        963      0.956      0.918      0.955      0.669
51                 Smoke        574        617      0.925      0.865      0.911      0.573
52 Speed: 0.2ms preprocess, 1.5ms inference, 0.0ms loss, 1.0ms postprocess per image
53 Saving runs\evaluation\YOLO-GFL\predictions.json...
54 Results saved to runs\evaluation\YOLO-GFL
55 Ultralytics evaluation completed in 28.34 seconds
56
57 Real-world Performance Analysis
58 Calculating real-world performance metrics...
59 Found 1300 test images
60 Warming up model...
61 Processing images:   0%|          | 0/1300 [00:00<?, ?it/s]Measuring inference performance...
62 Processing images: 100%|          | 1300/1300 [00:29<00:00, 43.42it/s]
63   Processed 1300 images
64   Average inference time: 12.64 ms
65   FPS: 79.13
66
67 COMPREHENSIVE PERFORMANCE SUMMARY
68 Model          Size(MB)   Avg Time(ms)   Std Time(ms)    FPS       Images
69 YOLOv12        5.21       17.77          3.71            56.27     1300
70 YOLO-GFL       3.36       12.64          2.13            79.13     1300
71
72 Best FPS: YOLO-GFL (79.13 FPS)
73 Fastest Inference: YOLO-GFL (12.64 ms)
74
75 Generating performance visualizations...
76 Performance visualization saved to: runs/performance_analysis\performance_comparison.png
77 Time vs FPS comparison saved to: runs/performance_analysis\time_vs_fps_comparison.png
78 EVALUATION COMPLETE!
79
80 Process finished with exit code 0
81
```