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"G:\Car Number Plate Detection\Object Detection Using YOLOv8 (traffic sign)\venv\Scripts\python.exe" "G:\Car Number Plate Detection\Object Detection Using YOLOv8 (traffic sign)\main_train.py"

                   from  n    params  module                                       arguments
  0                  -1  1       464  ultralytics.nn.modules.conv.Conv             [3, 16, 3, 2]
  1                  -1  1      4672  ultralytics.nn.modules.conv.Conv             [16, 32, 3, 2]
  2                  -1  1      7360  ultralytics.nn.modules.block.C2f             [32, 32, 1, True]
  3                  -1  1     18560  ultralytics.nn.modules.conv.Conv             [32, 64, 3, 2]
  4                  -1  2     49664  ultralytics.nn.modules.block.C2f             [64, 64, 2, True]
  5                  -1  1     73984  ultralytics.nn.modules.conv.Conv             [64, 128, 3, 2]
  6                  -1  2    197632  ultralytics.nn.modules.block.C2f             [128, 128, 2, True]
  7                  -1  1    295424  ultralytics.nn.modules.conv.Conv             [128, 256, 3, 2]
  8                  -1  1    460288  ultralytics.nn.modules.block.C2f             [256, 256, 1, True]
  9                  -1  1    164608  ultralytics.nn.modules.block.SPPF            [256, 256, 5]
 10                  -1  1         0  torch.nn.modules.upsampling.Upsample         [None, 2, 'nearest']
 11             [-1, 6]  1         0  ultralytics.nn.modules.conv.Concat           [1]
 12                  -1  1    148224  ultralytics.nn.modules.block.C2f             [384, 128, 1]
 13                  -1  1         0  torch.nn.modules.upsampling.Upsample         [None, 2, 'nearest']
 14             [-1, 4]  1         0  ultralytics.nn.modules.conv.Concat           [1]
 15                  -1  1     37248  ultralytics.nn.modules.block.C2f             [192, 64, 1]
 16                  -1  1     36992  ultralytics.nn.modules.conv.Conv             [64, 64, 3, 2]
 17            [-1, 12]  1         0  ultralytics.nn.modules.conv.Concat           [1]
 18                  -1  1    123648  ultralytics.nn.modules.block.C2f             [192, 128, 1]
 19                  -1  1    147712  ultralytics.nn.modules.conv.Conv             [128, 128, 3, 2]
 20             [-1, 9]  1         0  ultralytics.nn.modules.conv.Concat           [1]
 21                  -1  1    493056  ultralytics.nn.modules.block.C2f             [384, 256, 1]
 22        [15, 18, 21]  1    897664  ultralytics.nn.modules.head.Detect           [80, [64, 128, 256]]
YOLOv8n summary: 225 layers, 3157200 parameters, 3157184 gradients, 8.9 GFLOPs

Ultralytics YOLOv8.0.221 □ Python-3.10.4 torch-2.1.1+cpu CPU (Intel Core(TM) i3-1005G1 1.20GHz)
engine\trainer: task=detect, mode=train, model=yolov8n.yaml, data=Custom_data.yaml, epochs=3, patience=50, batch=16, imgsz=640, save=True, save_period=-1, cache=False, device=None, workers=8, project=None, name=train2, exist_ok=False, pretrained=True, optimizer=auto, verbose=True, seed=0, deterministic=True, single_cls=False, rect=False, cos_lr=False, close_mosaic=10, resume=False, amp=True, fraction=1.0, profile=False, freeze=None, overlap_mask=True, mask_ratio=4, dropout=0.0, val=True, split=val, save_json=False, save_hybrid=False, conf=None, iou=0.7, max_det=300, half=False, dnn=False, plots=True, source=None, vid_stride=1, stream_buffer=False, visualize=False, augment=False, agnostic_nms=False, classes=None, retina_masks=False, show=False, save_frames=False, save_txt=False, save_conf=False, save_crop=False, show_labels=True, show_conf=True,
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show_boxes=True, line_width=None, format=torchscript, keras=False, optimize=False, int8=False, dynamic=False, simplify=False, opset=None, workspace=4, nms=False, lr0=0.01, lrf=0.01, momentum=0.937, weight_decay=0.0005, warmup_epochs=3.0, warmup_momentum=0.8, warmup_bias_lr=0.1, box=7.5, cls=0.5, dfl=1.5, pose=12.0, kobj=1.0, label_smoothing=0.0, nbs=64, hsv_h=0.015, hsv_s=0.7, hsv_v=0.4, degrees=0.0, translate=0.1, scale=0.5, shear=0.0, perspective=0.0, flipud=0.0, fliplr=0.5, mosaic=1.0, mixup=0.0, copy_paste=0.0, cfg=None, tracker=botsort.yaml, save_dir=runs\detect\train2
Overriding model.yaml nc=80 with nc=36

                   from  n    params  module                                       arguments
  0                  -1  1       464  ultralytics.nn.modules.conv.Conv             [3, 16, 3, 2]
  1                  -1  1      4672  ultralytics.nn.modules.conv.Conv             [16, 32, 3, 2]
  2                  -1  1      7360  ultralytics.nn.modules.block.C2f             [32, 32, 1, True]
  3                  -1  1     18560  ultralytics.nn.modules.conv.Conv             [32, 64, 3, 2]
  4                  -1  2     49664  ultralytics.nn.modules.block.C2f             [64, 64, 2, True]
  5                  -1  1     73984  ultralytics.nn.modules.conv.Conv             [64, 128, 3, 2]
  6                  -1  2    197632  ultralytics.nn.modules.block.C2f             [128, 128, 2, True]
  7                  -1  1    295424  ultralytics.nn.modules.conv.Conv             [128, 256, 3, 2]
  8                  -1  1    460288  ultralytics.nn.modules.block.C2f             [256, 256, 1, True]
  9                  -1  1    164608  ultralytics.nn.modules.block.SPPF            [256, 256, 5]
 10                  -1  1         0  torch.nn.modules.upsampling.Upsample         [None, 2, 'nearest']
 11             [-1, 6]  1         0  ultralytics.nn.modules.conv.Concat           [1]
 12                  -1  1    148224  ultralytics.nn.modules.block.C2f             [384, 128, 1]
 13                  -1  1         0  torch.nn.modules.upsampling.Upsample         [None, 2, 'nearest']
 14             [-1, 4]  1         0  ultralytics.nn.modules.conv.Concat           [1]
 15                  -1  1     37248  ultralytics.nn.modules.block.C2f             [192, 64, 1]
 16                  -1  1     36992  ultralytics.nn.modules.conv.Conv             [64, 64, 3, 2]
 17            [-1, 12]  1         0  ultralytics.nn.modules.conv.Concat           [1]
 18                  -1  1    123648  ultralytics.nn.modules.block.C2f             [192, 128, 1]
 19                  -1  1    147712  ultralytics.nn.modules.conv.Conv             [128, 128, 3, 2]
 20             [-1, 9]  1         0  ultralytics.nn.modules.conv.Concat           [1]
 21                  -1  1    493056  ultralytics.nn.modules.block.C2f             [384, 256, 1]
 22        [15, 18, 21]  1    758332  ultralytics.nn.modules.head.Detect           [36, [64, 128, 256]]
YOLOv8n summary: 225 layers, 3017868 parameters, 3017852 gradients, 8.2 GFLOPs

Freezing layer 'model.22.dfl.conv.weight'
train: Scanning G:\Car Number Plate Detection\Object Detection Using YOLOv8 (traffic sign)\TrafficSignLocalizationandDetection\train\labels.cache... 1392 images, 0 backgrounds, 0 corrupt: 100%|██████████| 1392/1392 [00:00<?, ?it/s]
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val: Scanning G:\Car Number Plate Detection\Object Detection Using YOLOv8 (traffic sign)\TrafficSignLocalizationandDetection\valid\labels.cache... 173 images, 0 backgrounds, 0 corrupt: 100%|██████████| 173/173 [00:00<?, ?it/s]
Plotting labels to runs\detect\train2\labels.jpg...
optimizer: 'optimizer=auto' found, ignoring 'lr0=0.01' and 'momentum=0.937' and determining best 'optimizer', 'lr0' and 'momentum' automatically...
optimizer: AdamW(lr=0.00025, momentum=0.9) with parameter groups 57 weight(decay=0.0), 64 weight(decay=0.0005), 63 bias(decay=0.0)
Image sizes 640 train, 640 val
Using 0 dataloader workers
Logging results to runs\detect\train2
Starting training for 3 epochs...

      Epoch    GPU_mem   box_loss   cls_loss   dfl_loss  Instances       Size
        1/3         0G      3.366      7.285      4.416         27        640: 100%|██████████| 87/87 [20:54<00:00, 14.42s/it]
                 Class     Images  Instances      Box(P          R      mAP50  mAP50-95): 100%|██████████| 6/6 [01:01<00:00, 10.18s/it]
                   all        173        212          0          0          0          0

      Epoch    GPU_mem   box_loss   cls_loss   dfl_loss  Instances       Size
        2/3         0G      3.321      6.936      4.182         25        640: 100%|██████████| 87/87 [16:44<00:00, 11.54s/it]
                 Class     Images  Instances      Box(P          R      mAP50  mAP50-95): 100%|██████████| 6/6 [01:00<00:00, 10.10s/it]
                   all        173        212    0.00102    0.00546   0.000628   0.000228
  0%|          | 0/87 [00:00<?, ?it/s]
      Epoch    GPU_mem   box_loss   cls_loss   dfl_loss  Instances       Size
        3/3         0G      3.169      6.618      4.019         24        640: 100%|██████████| 87/87 [17:37<00:00, 12.16s/it]
                 Class     Images  Instances      Box(P          R      mAP50  mAP50-95): 100%|██████████| 6/6 [01:05<00:00, 10.84s/it]
                   all        173        212    0.00285     0.0904     0.0078    0.00393

3 epochs completed in 0.974 hours.
Optimizer stripped from runs\detect\train2\weights\last.pt, 6.3MB
Optimizer stripped from runs\detect\train2\weights\best.pt, 6.3MB
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 88
 89 Validating runs\detect\train2\weights\best.pt...
 90 Ultralytics YOLOv8.0.221 ⍰ Python-3.10.4 torch-2.1.1+cpu CPU (Intel Core(TM) i3-1005G1 1.20GHz)
 91 YOLOv8n summary (fused): 168 layers, 3012668 parameters, 0 gradients, 8.1 GFLOPs
 92                  Class     Images  Instances      Box(P          R      mAP50  mAP50-95): 100%|██████████| 6/6 [00:49<00:
    00,  8.30s/it]
 93                    all        173        212    0.00283     0.0904    0.00774     0.0039
 94           Danger Ahead        173          7          0          0          0          0
 95               Give Way        173          6          0          0          0          0
 96   Go Right or Straight        173          1          0          0          0          0
 97            Go Straight        173          1          0          0          0          0
 98            Huddle Road        173          2          0          0          0          0
 99       Left Sharp Curve        173          3          0          0          0          0
100              No Entry        173         11    0.00613     0.0909     0.0344     0.0138
101  No Over Taking Trucks        173          1          0          0          0          0
102         No Over Taking        173          5          0          0          0          0
103            No Stopping        173          1          0          0          0          0
104             No Waiting        173          2          0          0          0          0
105             Pedestrian        173          2          0          0          0          0
106      Right Curve Ahead        173          6          0          0          0          0
107      Right Sharp Curve        173          3          0          0          0          0
108              Road Work        173          8          0          0          0          0
109             RoundAbout        173          1          0          0          0          0
110          Slippery Road        173          2          0          0          0          0
111      Snow Warning Sign        173          1          0          0          0          0
112        Speed Limit 100        173         12    0.00174     0.0833   0.000999   0.000499
113        Speed Limit 120        173          3          0          0          0          0
114         Speed Limit 30        173         23     0.0057      0.739     0.0351     0.0115
115         Speed Limit 50        173         20     0.0046       0.35     0.0156    0.00345
116         Speed Limit 60        173         14    0.00639      0.429     0.0107     0.0045
117         Speed Limit 70        173         14    0.00459      0.429     0.0802     0.0622
118         Speed Limit 80        173         14     0.0236      0.429     0.0307     0.0123
119                  Stop        173         33          0          0          0          0
120             Truck Sign        173          1          0          0          0          0
121              Turn Left        173          1          0          0          0          0
122             Turn Right        173         14     0.0294     0.0714     0.0166    0.00497
123 Speed: 5.0ms preprocess, 266.9ms inference, 0.0ms loss, 2.1ms postprocess per image
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124 Results saved to runs\detect\train2
125
126 Process finished with exit code 0
127
```