II. Basic information for winner announcement

Please provide your preferred information for use in announcing the winners of the competition.

- Name (first and last name or first name and last initial): **ASHISH KUMAR**
- Hometown: **INDIA**

III. Model documentation and write-up

Information included in this section may be shared publicly with challenge results. You can respond to these questions in an e-mail or as an attached file. Please number your responses.

1.I am a data science enthusiast and deep learning practitioner who primarily compete in data science competitions .

2.having interest in object detection motivated me to participate in this competition

3.My solution is a single yolov8s model trained on img size 1280 for 30 epochs. yolov8s gives best tradeoff between lb score and inference time..I started the competition with yolov8n with img size 640 but the performance was very poor and inference was taking around 105 minutes. While i was reading yolov8 documentation i came across openvino section where yolov8 author claims 3x increase in inference speed.I submitted the yolov8n model and it finished in in just 30 minutes. Then i tried yolov8s with size 1280 and few manual hyp tuning. The lb score reaches to (public 0.9148,private 0.9107).Training on full dataset increases the score to 0.9168/0.9141.
just need to add following two lines of code

```
model.export(format='openvino', imgsz = 1280)
model = YOLO('assets/model_openvino_model')
```

4. None

5. None

6.

- CPU (model): AMD Ryzen Threadripper 3960X 24-Core
- GPU (model or N/A):NVIDIA RTX A6000 48 GB
- Memory (GB):128 GB
- OS: ubuntu 20.01
- Train duration:4 hours
- Inference duration: around 1 hour 35 min

7. None

8. None
9. I saved model checkpoints at each epoch and evaluate checkpoint after training finished .

10.I tried knowledge distillation but with no success . I strongly believe that if properly implemented KD will definitely improve the score.

11.I would try knowledge distillation and more hyp tuning if i get chance to work on this problem again.

12.I think inference in openvino INT8 quantization can make inference faster