Yolo

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Yolo Image Classification

There are several kinds of versions

```
YOLOv8n-cls = 4.3 FLOPs
YOLOv8s-cls = 13.5 FLOPs
YOLOv8m-cls = 42.7 FLOPs
YOLOv8l-cls = 99.7 FLOPs
YOLOv8x-cls = 154.8 FLOPs
```

We can see that in this kind of models there's a letter that is changing first the n, s, m, l, x. Depending of the letter the algorithim is better but is heavier and need more resuources to train.

Supported Datasets

1. Caltech 101 -> images of 101 object categories for image classification tasks.
2. Caltech 256 -> 256 object categories and more challenging images.
3. CIFAR-10 -> 60K 32x32 color images in 10 classes
4. Cifar-100 -> Extended version of CIFAR-10 with 100 object categories and 600 images per class.
5. ImageNet -> A large-scale dataset for object detection and image classification with over 14 million images and 20,000 categories.
6. Your own dataset, base on the same format

Train-Yolov8

Flop's = Floating Point Operations Per Second, it's the metrci used to quantify a processor or computing system ability to perform this kind of procedures.

FLOPs are significant for several reasons: * Computational Efficnecy

- Energy Consumtion
- Model Compairson
- Model Optimization