AI Programming Project 2 Report

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1. Introduction

Like report 1, I also tested about object detection, but I used another model “Yolov8”(You Only Look Once), deep-learning based object detection model. I tested yolov8 for detecting fish or not.

2. Datasets & Result

Datasets: https://universe.roboflow.com/graphpuch/fish-detection-k9myl-klbpw

Result:

FPS	31.27
mAP 0.5	0.7632
mAP 0.5:0.95	0.4538
Box(P)	0.788
Box(R)	0.698

3. Analyze

1. Dataset’s lack

Dataset is less than 700, so if we get more datasets, maybe model’s prediction can improve.

2. mAP 0.5:0.95 is worse than mAP 0.5 too much

If we detect precisely, lower mAP 0.5:0.95 can cause bad effects. We have to increase quality of datasets or control confidence threshold properly.

3. Box(R) is not good

We have to collect more datasets for reducing False Negative.

4. Conclusion

Yolov8 is amazing model for object detection. But quantity and quality of dataset is the most important element of AI.