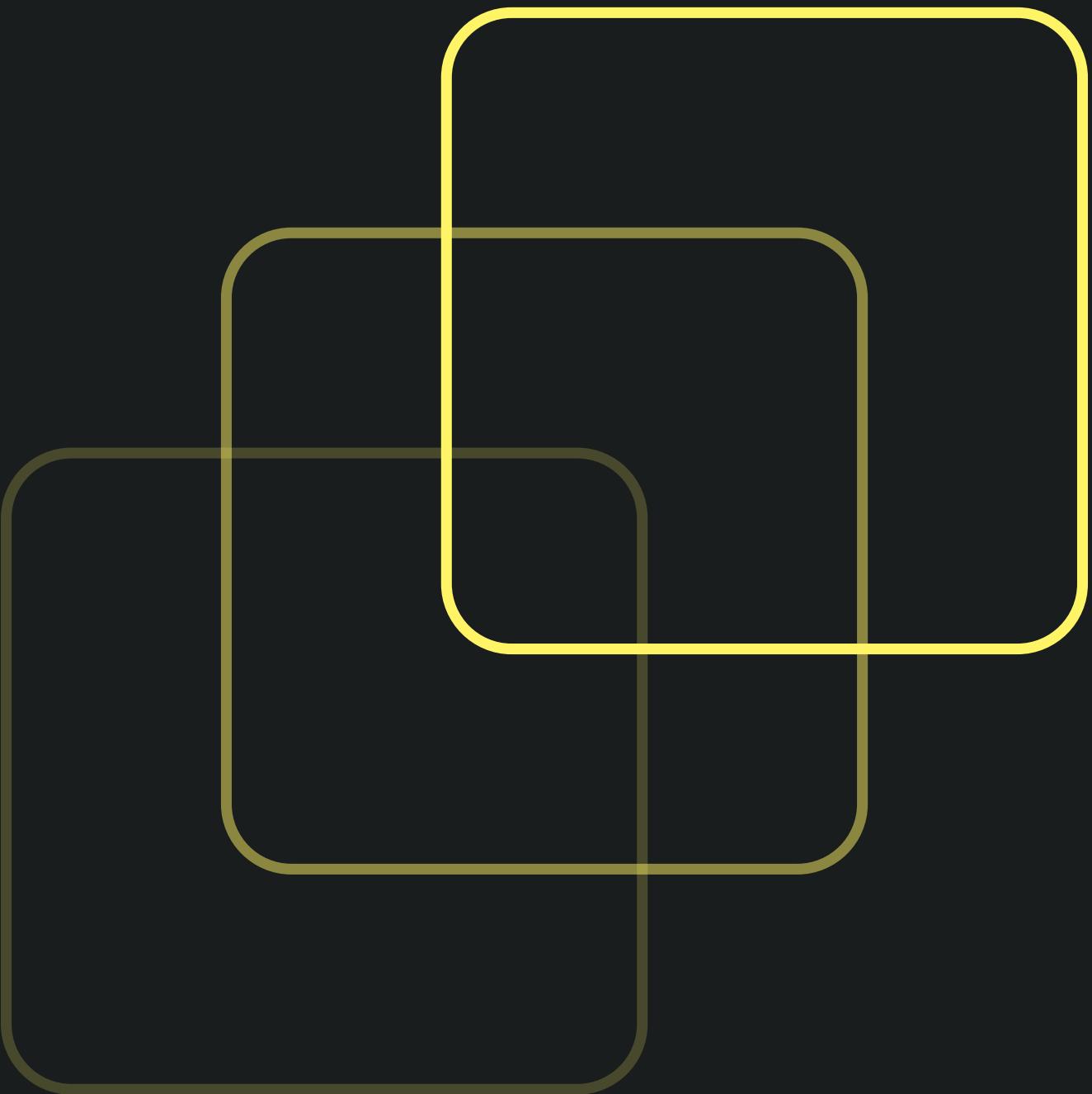
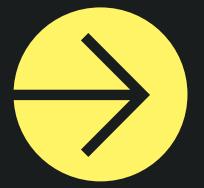


# Stock Objects

Brad Blackwood



# Create an investing tool for everyone.



Leverage machine learning and computer vision to identify stock patterns in real time.



# Agenda

**01** The Problem

**02** Data/Methods

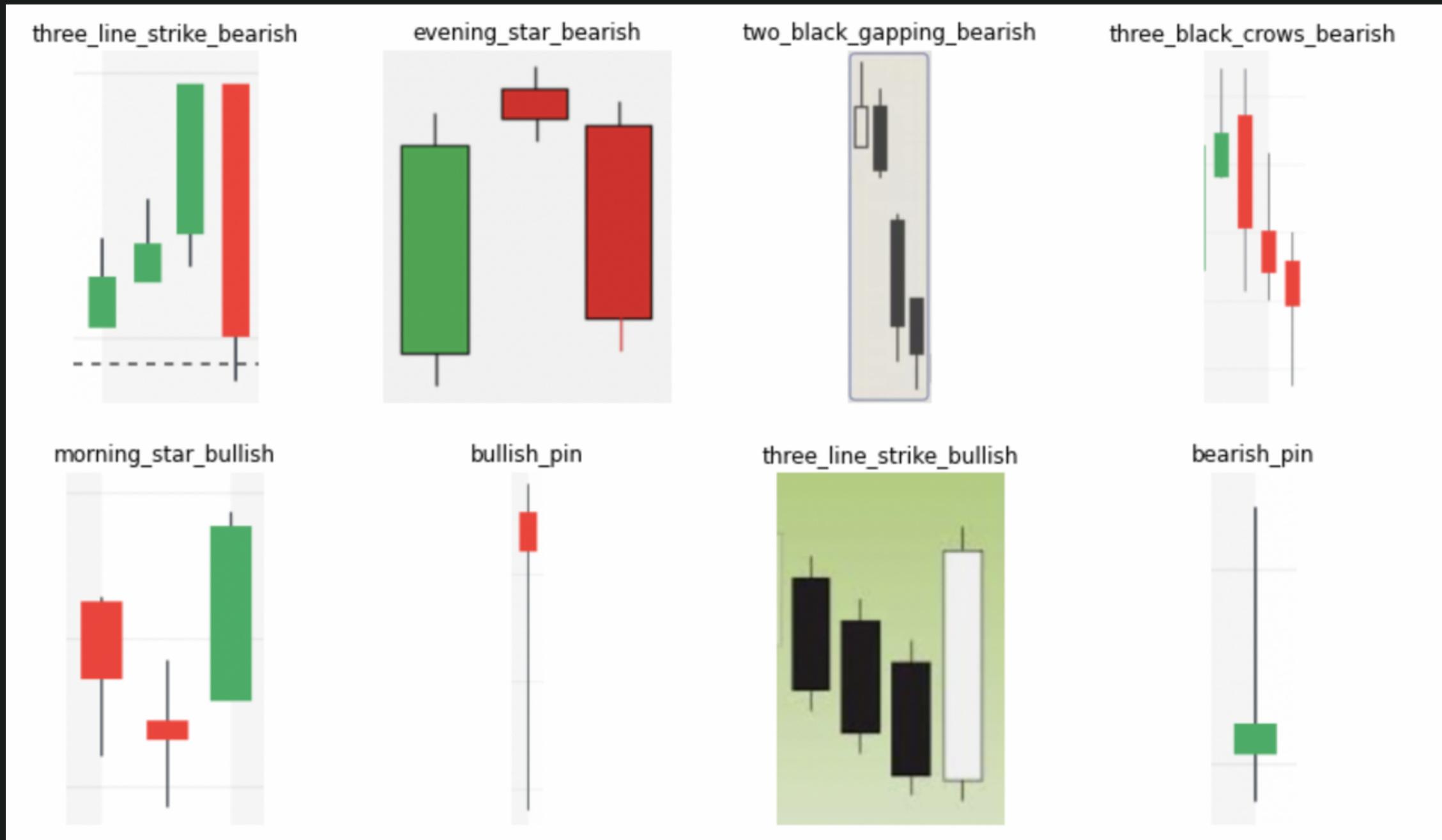
**03** Results

**04** Conclusion

# The Problem



# Trading in the Future



## Free Market

Everyone should be on a level playing field.

## Research

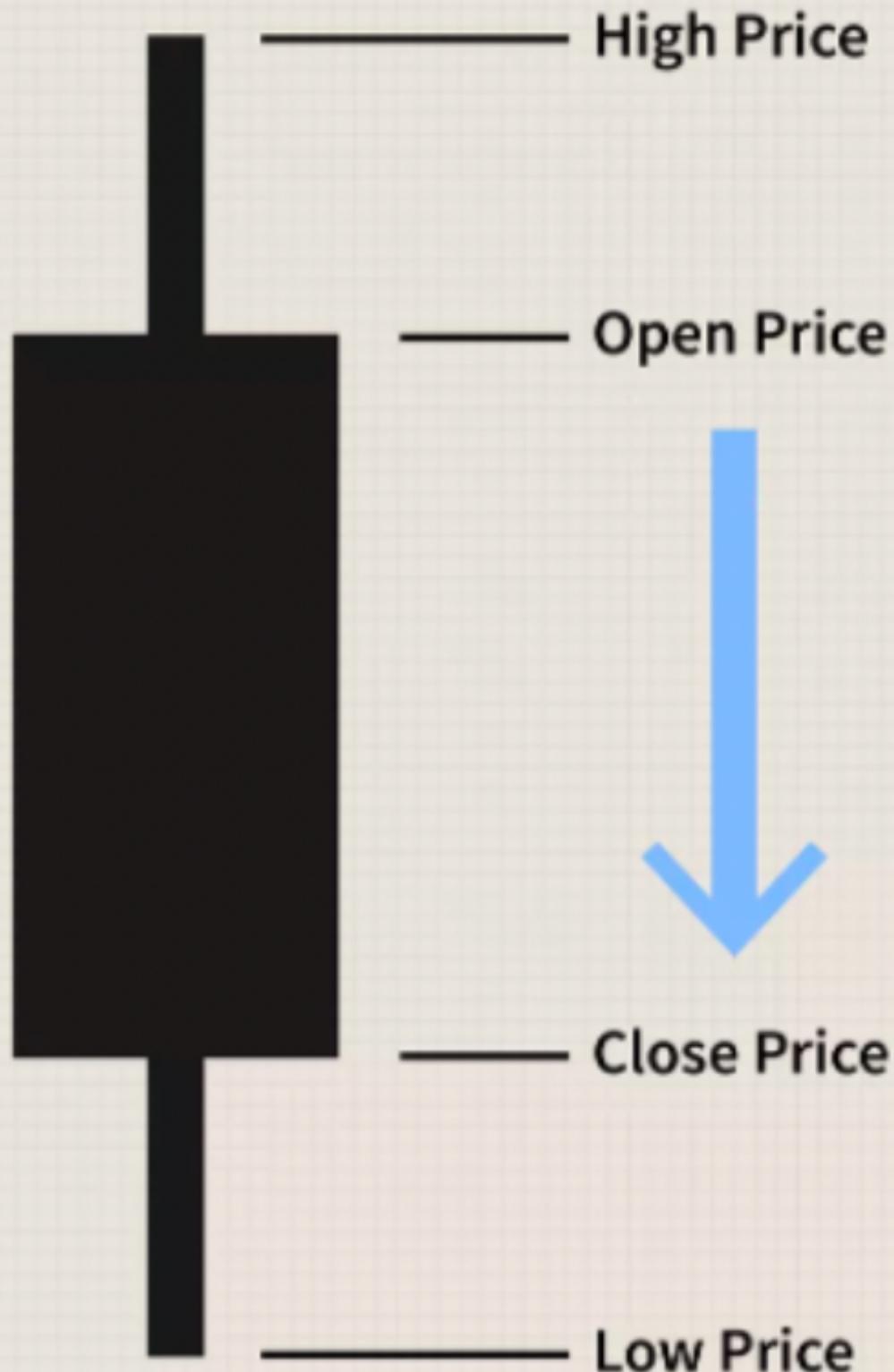
Be able to compare and quantify strategies.

## Future

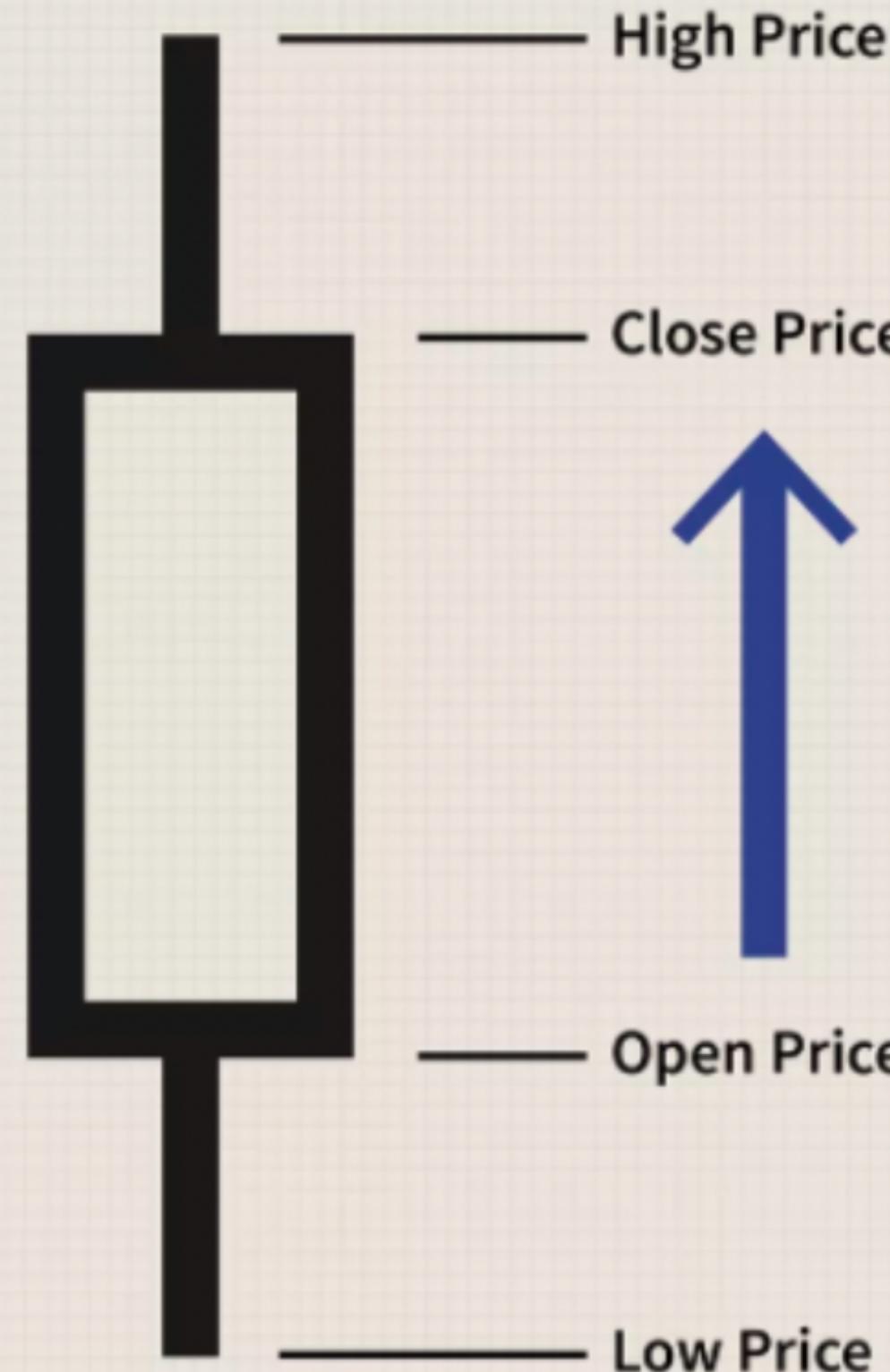
Trading can be a science, not an art.



## **BEARISH** Candlestick



## **BULLISH** Candlestick



# Data & Methods

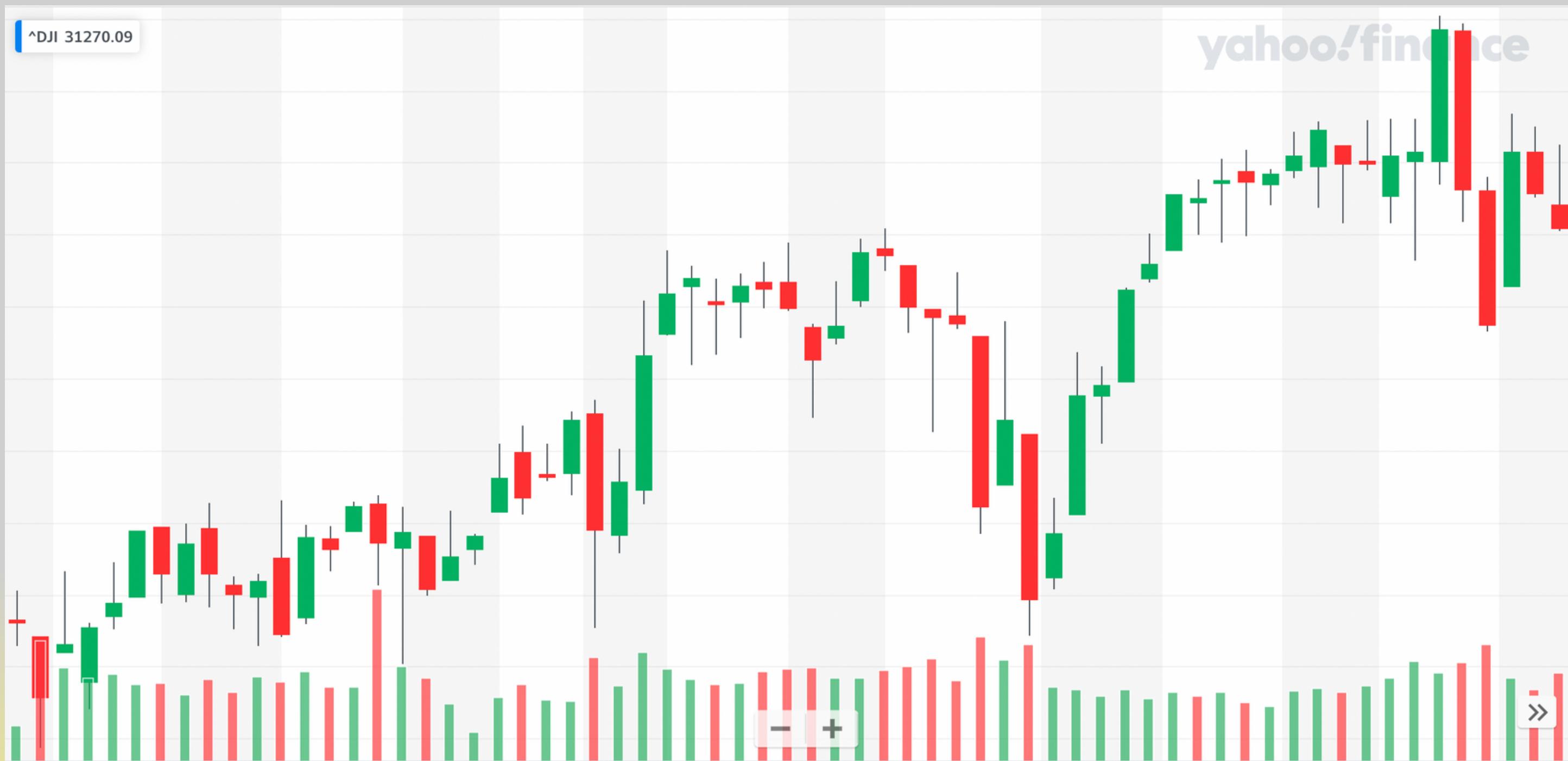


# Images

~150  
YahooFinance

# Labels

~500  
Roboflow



# YOLO

you only look once

Joseph Redmond (2016)

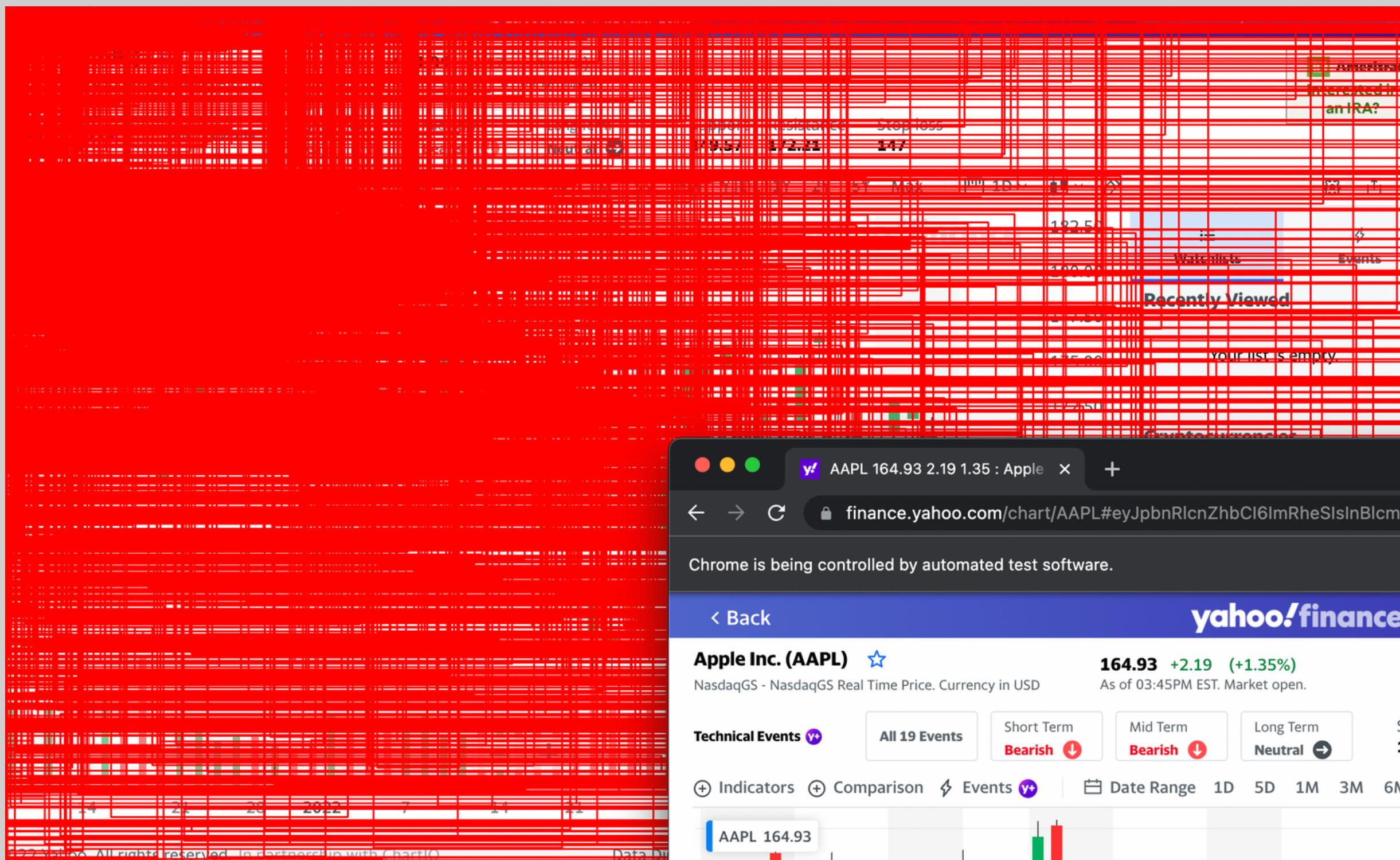
New approach

Ultralytics

YOLOv5



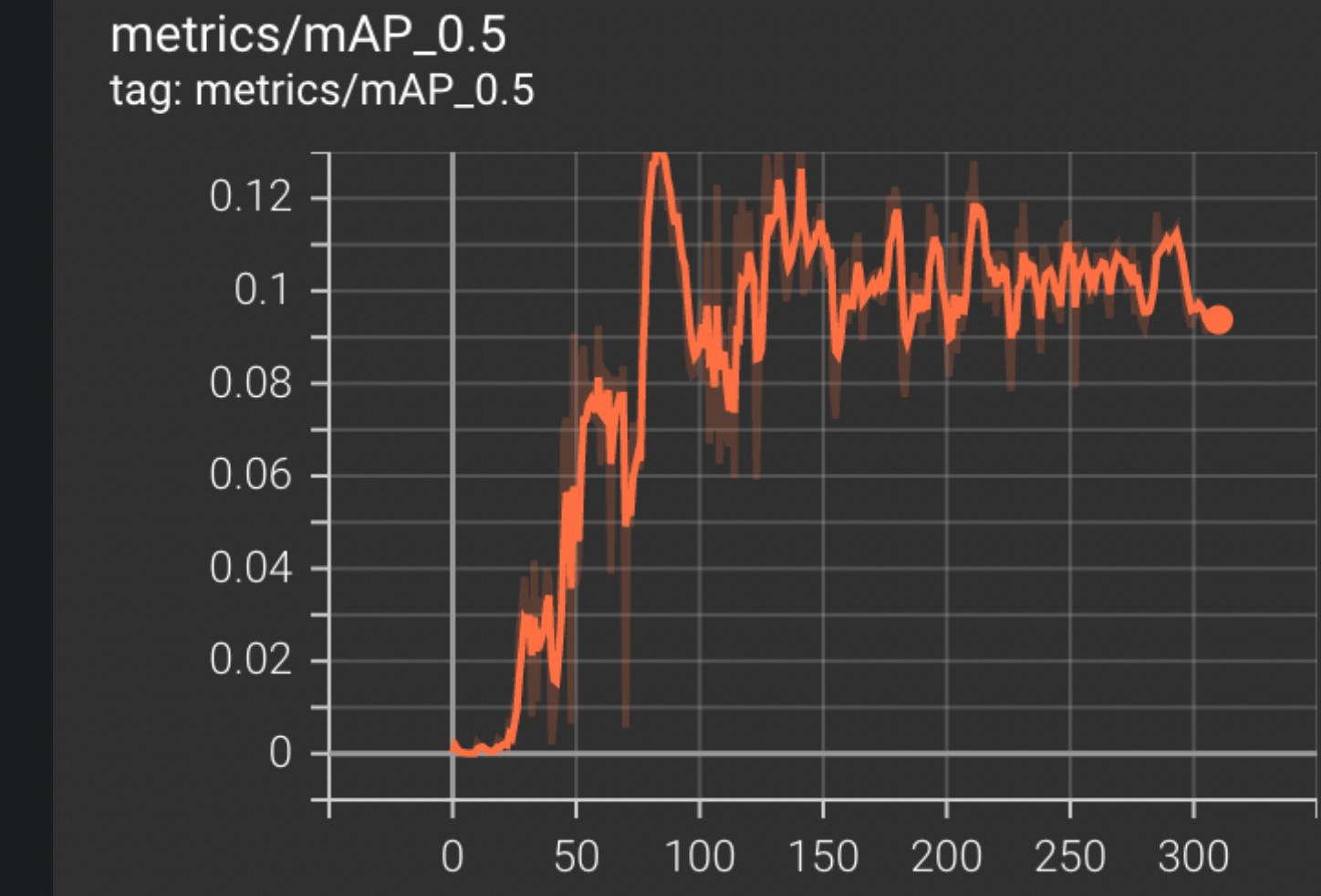
# Results



# Object Detection

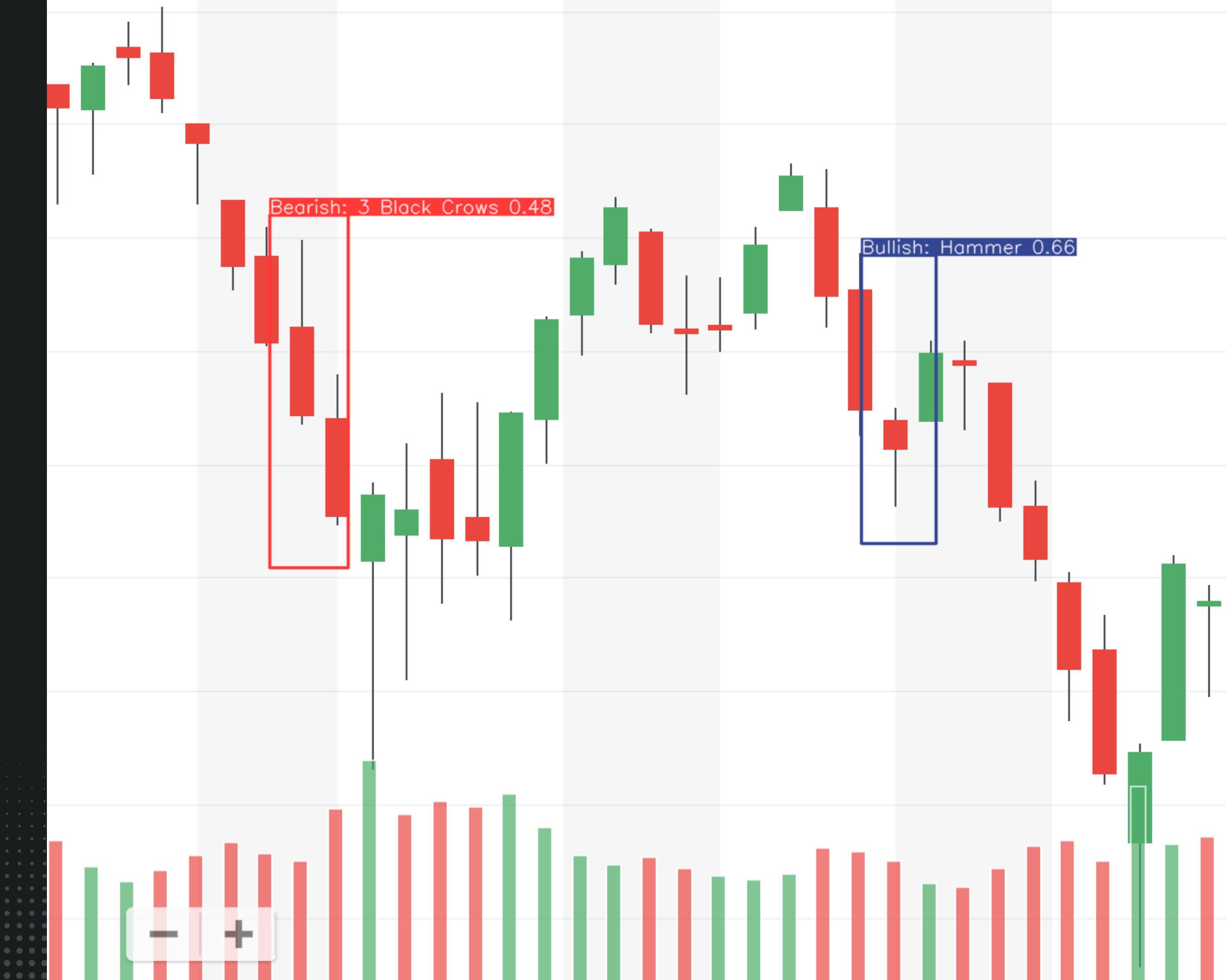


mAP = mean average precision



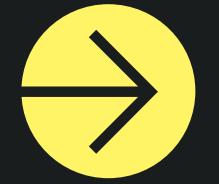
custom trained vs. pretrained  
0.1            0.37

# Conclusion





# Recommendations



## Proof of concept

Success

## More Images

More Data

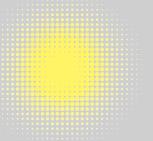
## Better Labels

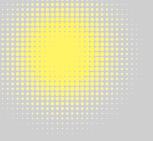
Better Quality

# Thank You

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 **Medium: blackwoodbs**

 **Github: blackwoodbs**