

Classify Muay Thai

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Neda Saleem
Dec 8th, 2020



What is Muay Thai?

Fists



Knees



Elbows



Shins



Motivation



Motivation



Repeating Combos



No feedback



Goal

Track moves in fights real-time.

Uses



Generate best
attack
responses.



Personalized
training
sessions.

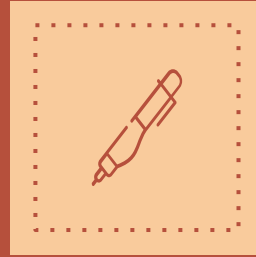


Methodology



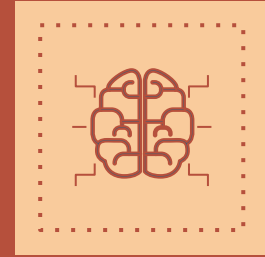
Data Collection

1,156 images of
Muay Thai moves



Pre-Processing

Label images using
Labellmg



Model

YOLOv3 with
Darknet framework



Open



Open Dir



Change Save Dir



Next Image



Prev Image



Verify Image



Save

yolo

YOLO



Create RectBox



Duplicate RectBox



Delete RectBox



Box Labels

Edit Label

☐ difficult

☐ Use default label



File List



Open



Open Dir



Change Save Dir



Next Image



Prev Image



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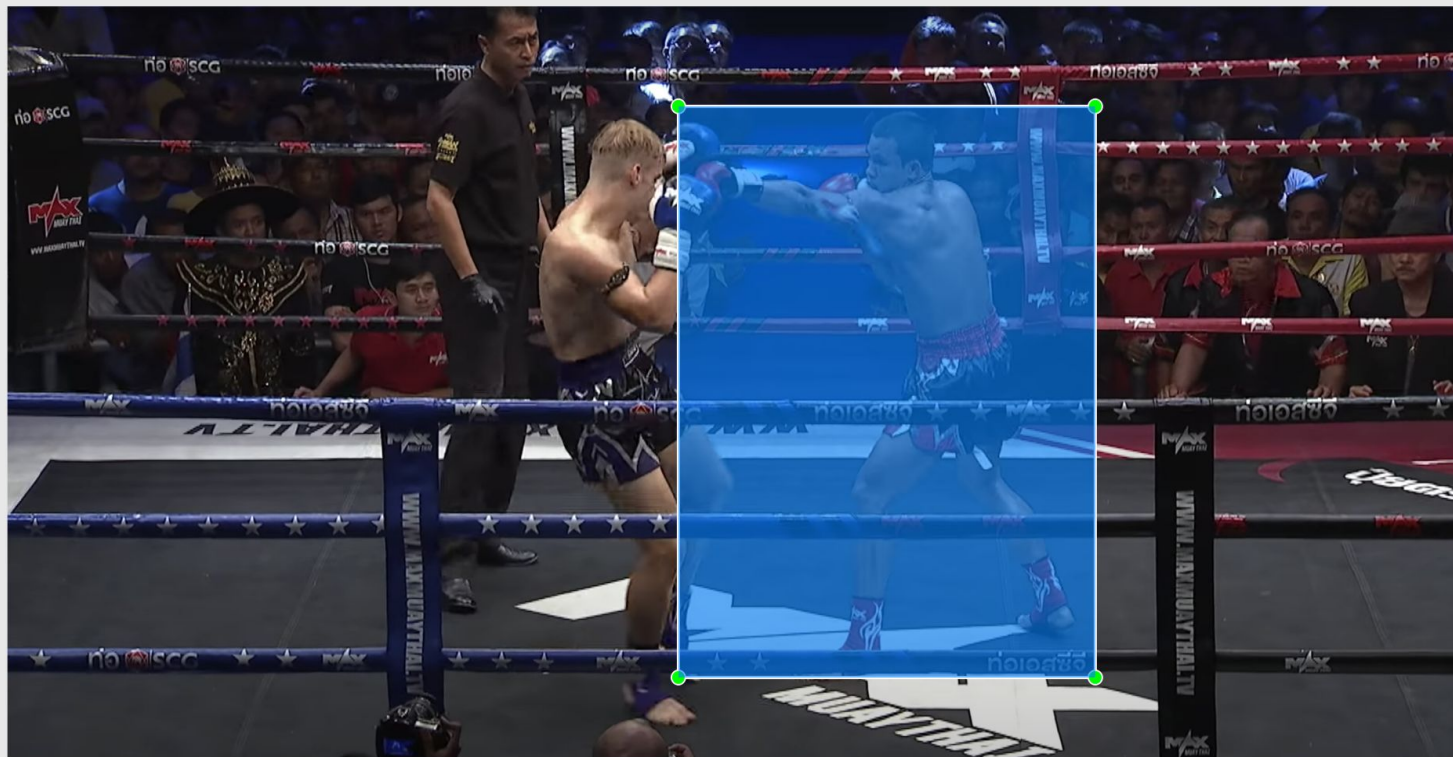
Create RectBox



Duplicate RectBox



Delete RectBox



Box Labels

Edit Label

☐ difficult

☐ Use default label

☒ punch

File List



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yolo

YOLO



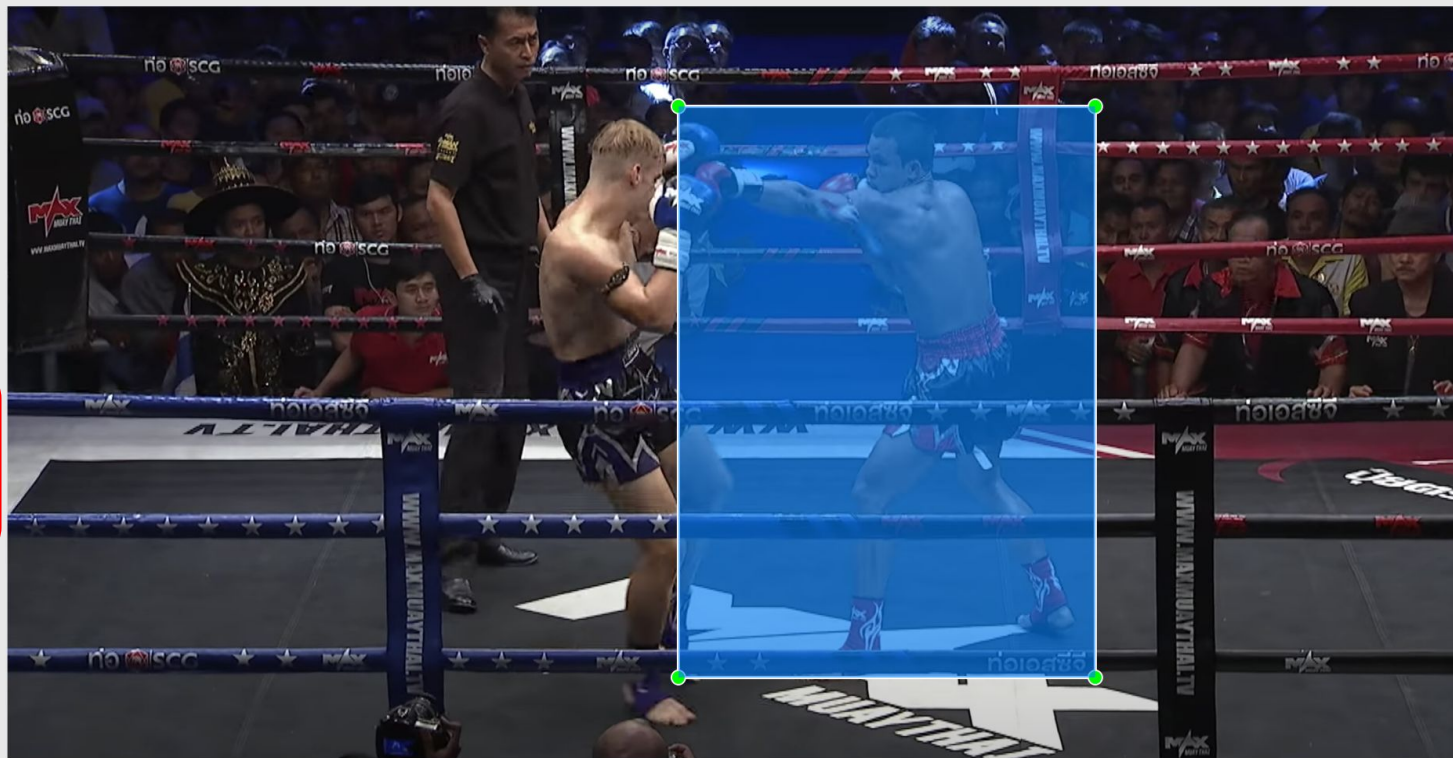
Create RectBox



Duplicate RectBox



Delete RectBox



Edit Label

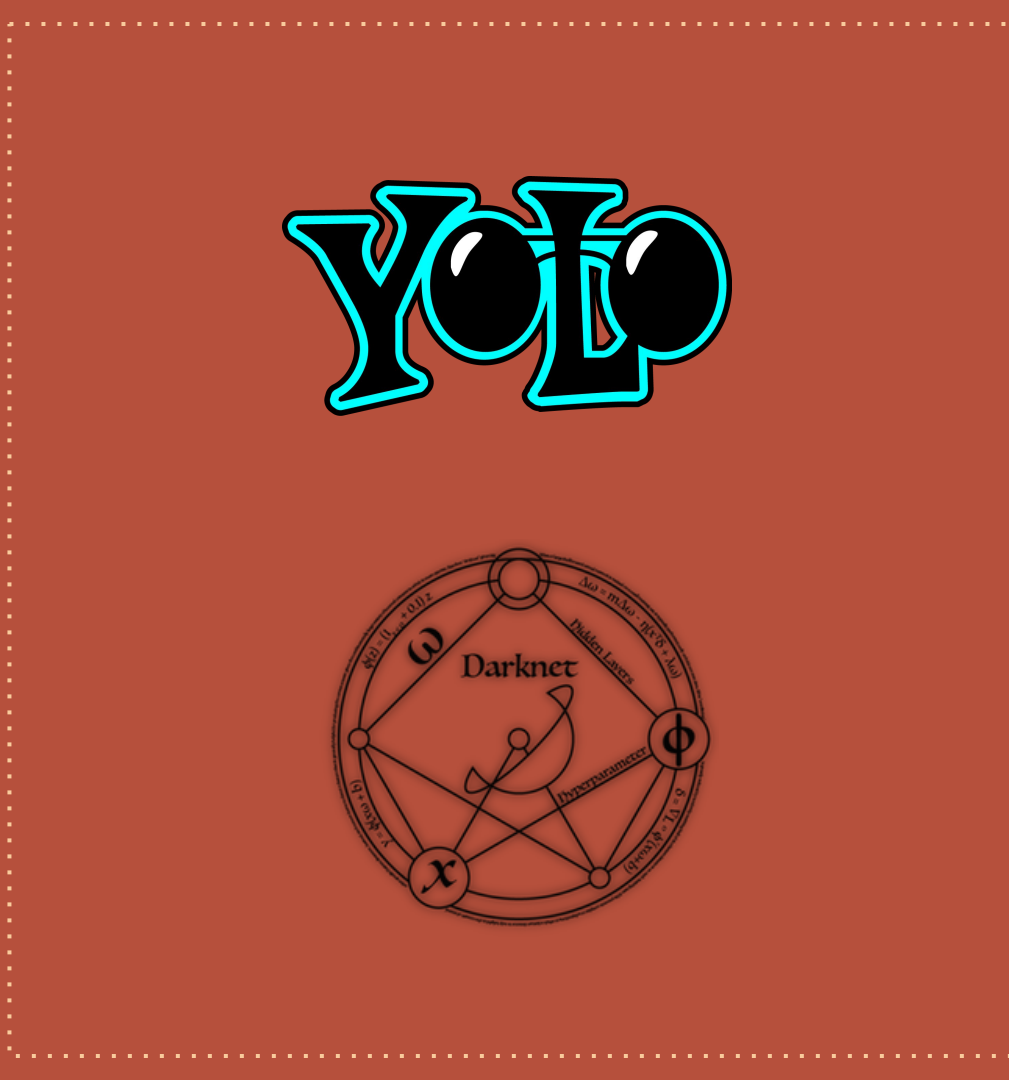
☐ difficult

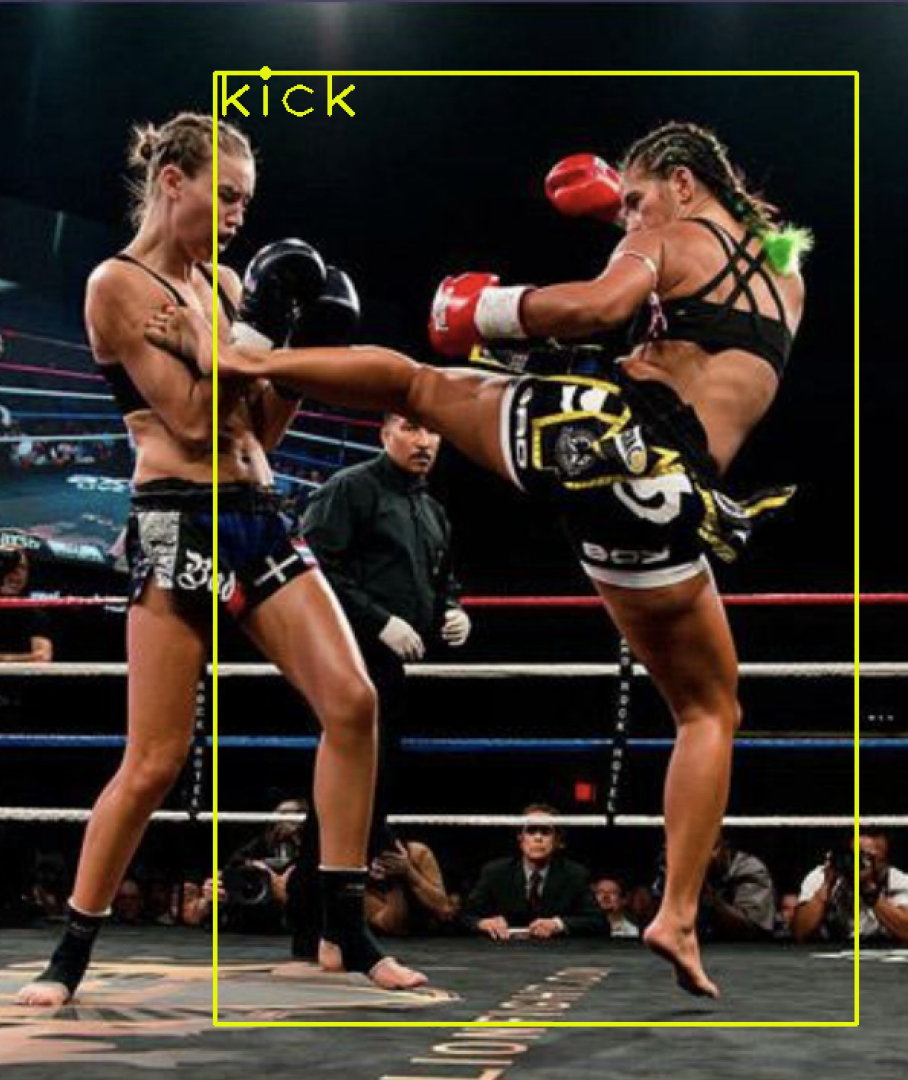
☐ Use default label

☒ punch

File List

.....





Results

- Images
- Pre-Recorded
- Live Feed

Results

.....


Results - Pre Recorded

 - Stance

 - Clinch

 - Kick

 - Punch

 - Knee

 - Elbow

Results - Live via Webcam

 - Stance

 - Punch

 - Knee

 - Kick

 - Clinch

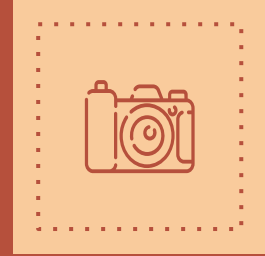
Improvements



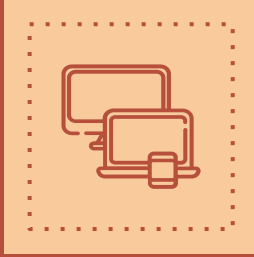
**Real-time
Classification**



Elbows and Knees



Camera Angle



App

-User Webcam



Stats

-Number of strikes
-Hit or miss



Best Response

-Counter attack per
move/style



Thank you!

Questions?

Appendix - Slo mo

 - Stance

 - Clinch

 - Kick

 - Punch

 - Knee

 - Elbow

Appendix - 0.3 Thresh

Yellow - Stance

Green - Clinch

Purple - Kick

Dark Blue - Punch

Light Blue - Knee

Mint - Elbow