

Project Development Phase Model Performance Test

Date	10 November 2022
Team ID	PNT2022TMID36007
Project Name	Project - Virtual Eye
Maximum Marks	10 Marks


Model Performance Testing:

Project team shall fill the following information in model performance testing template.

S.No.	Parameter	Values	Screenshot
1.	Model Summary	-	Pre trained yolo v3 and yolo v3 tiny models
2.	Accuracy	Training Accuracy - Validation Accuracy -	Not Applicable
3.	Confidence Score (Only Yolo Projects)	Class Detected - Confidence Score -	Confidence score and class labels are given below in the screenshots.

127.0.0.1:5000
Home Login Register

Virtual Eye




ABOUT PROJECT

Problem:


The person who is swimming in a pool needs to be rescued as soon as possible if he/she is drowning so that he/she does not die and swim without the fear of drowning. The problem affects a lot of people than we think it does. It affects the person who drowns loses his life. The person's kin and kith become traumatized by the loss of their loved one. The fellow swimmers who used to practice along with the person who drowned get their confidence and passion towards swimming lowered. Though Swimming is a healthy exercise and popular sport there is always a risk of people drowning. More than the fear of losing a swimming competition the fear of drowning affects a lot of people making them refrain from practicing.

Solution:

The main idea revolves around capturing the swimmers real time and using only the important features like hand movements and threshold values of movement to predict if the person is drowning or not. This can be implemented using yolo packages in such a way that we reduce the computational overload by considering only the important features for prediction. The real time capturing of the swimmers is done using a camera and the captured footage is used for further processing, then using a pre trained model we predict and trigger the buzzer sound



Login



Register

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127.0.0.1:5000/prediction

How to make a Cal...Free Linux Program...Free Programming...highered.mheducat...Programming & En...Excitation table - W...Online Kamaugh m...Mockaroo - Rando...sem 3Slack | do | Omegaa...

Virtual Eye

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Virtual Eye-Life Guard for Swimming Pools to Detect Active Drowning

Swimming is one of the best exercises that helps people to reduce stress in this urban lifestyle. Swimming pools are found larger in number in the hotels, weekend tourist spots and barely people have in their house backyard. Beginners, especially often feel it difficult to breathe under water and causes breathing trouble which in turn cause a drowning accident. Worldwide, drowning produces a higher rate of mortality without causing injury to children. Children under six of their age are found to be suffering the highest drowning mortality rates worldwide...Such kinds of deaths account for the third cause of unplanned death globally, with about 1.2 million cases yearly.

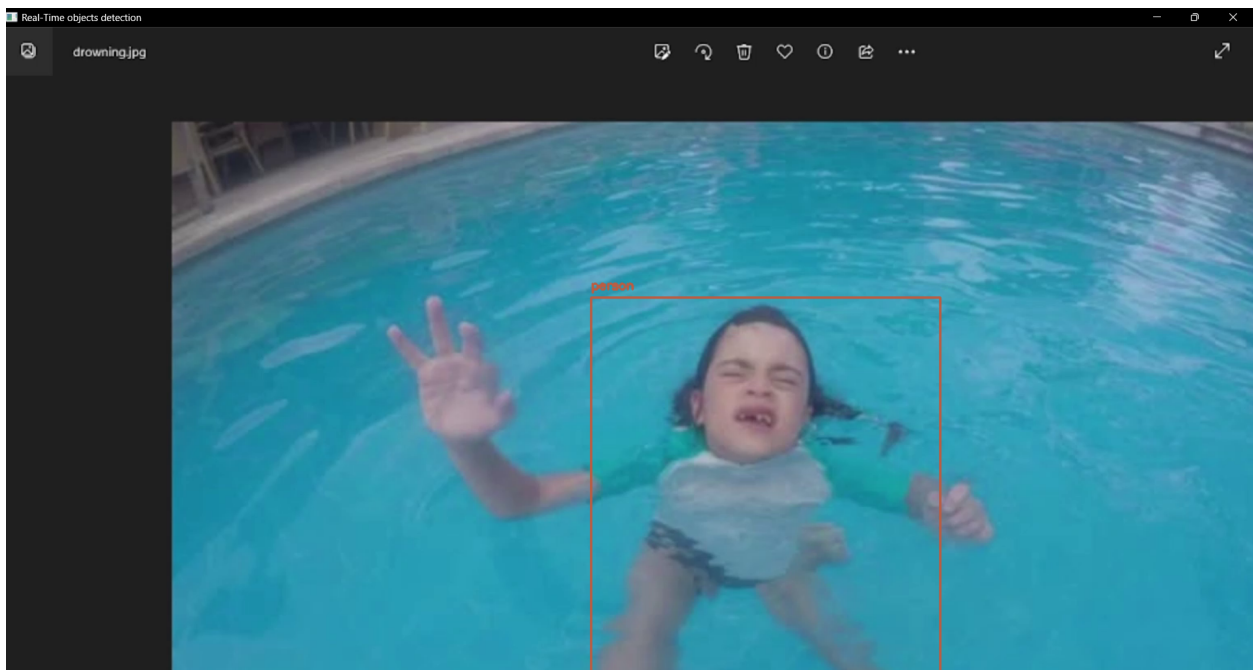
☐ Yolo v3

☒ Yolo v3 tiny

Predict

Checking for drowning

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127.0.0.1:5000/result
Free Programming...
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Programming & En...
Excitation table - W...
Online Kamaugh m...
Mockaroo - Rando...
sem 3
Slack | do | Omega...

Virtual Eye

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☐ Yolo v3
☐ Yolo v3 tiny

Predict

Emergency !!! The Person is drowning in bottom left

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Confidence scores and class labels are given in this screenshot

File Edit Selection View Go Run Terminal Help
IBM_Project

EXPLORER
IBM_PROJECT
__pycache__
static
templates
base.html
index.html
login.html
logout.html
prediction.html
register.html
app.py
drowning.jpg
drowning.mkv
drowning.amp4
sound.mp3
sound.wav
whitebg.mkv
whitebg.amp4

PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE
5.773587942123413 s
bbox: [[722, 331, 1150, 920]] center: [936.0, 625.5] center0: [936.0, 625.5]
Is he drowning (1): False
confidence : [0.7184839248657227] label : ['person']
bbox : [[721, 331, 1150, 920]]
6.096590200532837 s
bbox: [[721, 331, 1150, 920]] center: [935.5, 625.5] center0: [936.0, 625.5]
Is he drowning (1): False
confidence : [0.7182673215866089] label : ['person']
bbox : [[721, 331, 1150, 920]]
6.409590721130371 s
bbox: [[721, 331, 1150, 920]] center: [935.5, 625.5] center0: [935.5, 625.5]
Is he drowning (1): False
confidence : [0.7183047533035278] label : ['person']
bbox : [[721, 331, 1150, 920]]
6.708587646484375 s
bbox: [[721, 331, 1150, 920]] center: [935.5, 625.5] center0: [935.5, 625.5]
Is he drowning (1): False
confidence : [0.7193827629089355] label : ['person']
bbox : [[721, 331, 1150, 920]]
7.238310813903809 s
bbox: [[721, 331, 1150, 920]] center: [935.5, 625.5] center0: [935.5, 625.5]
Is he drowning (1): False
confidence : [0.7193851470947266] label : ['person']
bbox : [[721, 331, 1150, 920]]
7.5863611698150635 s
bbox: [[721, 331, 1150, 920]] center: [935.5, 625.5] center0: [935.5, 625.5]
Is he drowning (1): False
confidence : [0.7191121578216553] label : ['person']
bbox : [[721, 331, 1150, 920]]
7.936416864395142 s
confidence : [0.720169186592102] label : ['person']
bbox : [[721, 331, 1150, 920]]
10.292428255081177 s
bbox: [[721, 331, 1150, 920]] center: [935.5, 625.5] center0: [935.5, 625.5]
Is he drowning (1): True
127.0.0.1 - - [24/Nov/2022 00:13:28] "POST /result HTTP/1.1" 200 -
127.0.0.1 - - [24/Nov/2022 00:13:28] "GET /static/pics/avatar.jpg HTTP/1.1" 304 -

OUTLINE
TIMELINE
Go Live

Virtual Eye

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Successfully Logged Out...

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```
mod=request.form['model']
# print(mod)
# print("loooooooooooooooooooooooooooooo")
while webcam1.isOpened():

    # mod='holov3-tiny'
    threshold=10
    status,frame=webcam1.read()
    bbox,label,conf=cv.detect_common_objects(frame,model=mod)

    status1,frame1=webcam2.read()
    bbox1,label1,conf1=cv.detect_common_objects(frame1,model=mod)

    status2,frame2=webcam3.read()
    bbox2,label2,conf2=cv.detect_common_objects(frame2,model=mod)

    status3,frame3=webcam4.read()
    bbox3,label3,conf3=cv.detect_common_objects(frame3,model=mod)
    print("confidence :",conf," label :",label)
    # print("seeeeeeee")
    # print("-----")
    print("bbox :",bbox)
    # print("-----")
    if(len(bbox)>0):

        bbox0=bbox[0]
```