

## PROJECT DEVELOPMENT PHASE

### SPRINT - 3

<b>Date</b>	<b>30 October 2022</b>
<b>Team ID</b>	<b>PNT2022TMID27502</b>
<b>Project Name</b>	<b>Project -VirtualEye - Life Guard for Swimming Pools to Detect Active Drowning</b>

# Testing  
# batch=1  
# subdivisions=1 #  
Training batch=64  
subdivisions=16  
width=608  
height=608  
channels=3  
momentum=0.9  
decay=0.0005  
angle=0  
saturation = 1.5  
exposure = 1.5  
hue=.1  
learning\_rate=0.0  
1 burn\_in=1000  
max\_batches =  
500200  
policy=steps  
steps=400000,450  
000 scales=.1,.1  
[convolutional]  
batch\_normalize=  
1 filters=32 size=3  
stride=1 pad=1  
activation=leaky  
# Downsample  
[convolutional]  
batch\_normalize=  
e=1 filters=64

size=3 stride=2  
pad=1  
activation=leaky  
[convolutional]  
batch\_normalization=1 filters=32  
size=1 stride=1  
pad=1  
activation=leaky  
[convolutional]  
batch\_normalization=1 filters=64  
size=3 stride=1  
pad=1  
activation=leaky [shortcut]  
from=-3  
activation=linear  
# Downsample  
[convolutional]  
batch\_normalization=1 filters=128  
size=3 stride=2  
pad=1  
activation=leaky  
[convolutional]  
batch\_normalization=1 filters=64  
size=1 stride=1  
pad=1  
activation=leaky  
[convolutional]  
batch\_normalization=1 filters=128  
size=3 stride=1

pad=1  
activation=leaky [shortcut]  
from=-3  
activation=linear  
[convolutional]  
batch\_normalization=1 filters=64  
size=1 stride=1  
pad=1  
activation=leaky  
[convolutional]  
batch\_normalization=1 filters=128  
size=3 stride=1  
pad=1  
activation=leaky [shortcut]  
from=-3  
activation=linear  
ar  
# Downsample  
[convolutional]  
batch\_normalization=1 filters=256  
size=3 stride=2  
pad=1  
activation=leaky  
[convolutional]  
batch\_normalization=1 filters=128  
size=1 stride=1  
pad=1  
activation=leaky  
[convolutional]  
batch\_normalization=1

e=1 filters=256  
size=3 stride=1  
pad=1  
activation=leaky [shortcut]  
from=-3  
activation=linear  
[convolutional]  
batch\_normalization  
e=1 filters=128  
size=1 stride=1  
pad=1  
activation=leaky  
[convolutional]  
batch\_normalization  
e=1 filters=256  
size=3 stride=1  
pad=1  
activation=leaky [shortcut]  
from=-3  
activation=linear  
[convolutional]  
batch\_normalization  
e=1 filters=128  
size=1 stride=1  
pad=1  
activation=leaky  
[convolutional]  
batch\_normalization  
e=1 filters=256  
size=3  
stride=1 pad=1  
activation=leaky [shortcut]  
from=-3

activation=line  
ar  
[convolutional]  
batch\_normaliz  
e=1 filters=128  
size=1 stride=1  
pad=1  
activation=leak  
y  
[convolutional]  
batch\_normaliz  
e=1 filters=256  
size=3 stride=1  
pad=1  
activation=leak  
y [shortcut]  
from=-3  
activation=line  
ar  
[convolutional]  
batch\_normaliz  
e=1 filters=128  
size=1 stride=1  
pad=1  
activation=leak  
y  
[convolutional]  
batch\_normaliz  
e=1 filters=256  
size=3 stride=1  
pad=1  
activation=leak  
y [shortcut]  
from=-3  
activation=line  
ar  
[convolutional]  
batch\_normaliz  
e=1 filters=128  
size=1 stride=1

pad=1  
activation=leaky  
y  
[convolutional]  
batch\_normaliz  
e=1 filters=256  
size=3 stride=1  
pad=1  
activation=leaky  
y [shortcut]  
from=-3  
activation=linear  
ar  
[convolutional]  
batch\_normaliz  
e=1 filters=128  
size=1 stride=1  
pad=1  
activation=leaky  
y  
[convolutional]  
batch\_normaliz  
e=1 filters=256  
size=3 stride=1  
pad=1  
activation=leaky  
y [shortcut]  
from=-3  
activation=linear  
ar  
[convolutional]  
batch\_normaliz  
e=1 filters=128  
size=1 stride=1  
pad=1  
activation=leaky  
y  
[convolutional]  
batch\_normaliz  
e=1 filters=256

size=3 stride=1  
pad=1  
activation=leaky [shortcut]  
from=-3  
activation=linear  
# Downsample  
[convolutional]  
batch\_normalization=1 filters=512  
size=3 stride=2  
pad=1  
activation=leaky  
[convolutional]  
batch\_normalization=1 filters=256  
size=1 stride=1  
pad=1  
activation=leaky  
[convolutional]  
batch\_normalization=1 filters=512  
size=3 stride=1  
pad=1  
activation=leaky [shortcut]  
from=-3  
activation=linear  
[convolutional]  
batch\_normalization=1 filters=256  
size=1 stride=1  
pad=1  
activation=leaky  
[convolutional]

batch\_normaliz  
e=1 filters=512  
size=3 stride=1  
pad=1  
activation=leak  
y [shortcut]  
from=-3  
activation=line  
ar  
[convolutional]  
batch\_normaliz  
e=1 filters=256  
size=1 stride=1  
pad=1  
activation=leak  
y  
[convolutional]  
batch\_normaliz  
e=1 filters=512  
size=3 stride=1  
pad=1  
activation=leak  
y [shortcut]  
from=-3  
activation=line  
ar  
[convolutional]  
batch\_normaliz  
e=1 filters=256  
size=1 stride=1  
pad=1  
activation=leak  
y  
[convolutional]  
batch\_normaliz  
e=1 filters=512  
size=3 stride=1  
pad=1  
activation=leak  
y [shortcut]



from=-3  
activation=line  
ar  
[convolutional]  
batch\_normaliz  
e=1 filters=256  
size=1 stride=1  
pad=1  
activation=leak  
y  
[convolutional]  
batch\_normaliz  
e=1 filters=512  
size=3 stride=1  
pad=1  
activation=leak  
y [shortcut]  
from=-3  
activation=line  
ar  
[convolutional]  
batch\_normaliz  
e=1 filters=256  
size=1 stride=1  
pad=1  
activation=leak  
y  
[convolutional]  
batch\_normaliz  
e=1 filters=512  
size=3 stride=1  
pad=1  
activation=leak  
y [shortcut]  
from=-3  
activation=line  
ar  
[convolutional]  
batch\_normaliz  
e=1 filters=256

size=1 stride=1  
pad=1  
activation=leaky  
[convolutional]  
batch\_normaliz  
e=1 filters=512  
size=3 stride=1  
pad=1  
activation=leaky  
[shortcut]  
from=-3  
activation=linear  
[convolutional]  
batch\_normaliz  
e=1 filters=256  
size=1 stride=1  
pad=1  
activation=leaky  
[convolutional]  
batch\_normaliz  
e=1 filters=512  
size=3 stride=1  
pad=1  
activation=leaky  
[shortcut]  
from=-3  
activation=linear  
# Downsample  
[convolutional]  
batch\_normaliz  
e=1  
filters=1024  
size=3  
stride=2 pad=1  
activation=leaky

[convolutional]  
batch\_normaliz  
e=1 filters=512  
size=1 stride=1  
pad=1  
activation=leak  
y  
[convolutional]  
batch\_normaliz  
e=1  
filters=1024  
size=3 stride=1  
pad=1  
activation=leak  
y [shortcut]  
from=-3  
activation=line  
ar  
[convolutional]  
batch\_normaliz  
e=1 filters=512  
size=1 stride=1  
pad=1  
activation=leak  
y  
[convolutional]  
batch\_normaliz  
e=1  
filters=1024  
size=3 stride=1  
pad=1  
activation=leak  
y [shortcut]  
from=-3  
activation=line  
ar  
[convolutional]  
batch\_normaliz  
e=1 filters=512  
size=1 stride=1

```
pad=1
activation=leak
y
[convolutional]
batch_normaliz
e=1
filters=1024
size=3 stride=1
pad=1
activation=leak
y [shortcut]
from=-3
activation=line
ar
[convolutional]
batch_normaliz
e=1 filters=512
size=1 stride=1
pad=1
activation=leak
y
[convolutional]
batch_normaliz
e=1
filters=1024
size=3 stride=1
pad=1
activation=leak
y [shortcut]
from=-3
activation=line
ar
#####
[convolutional]
batch_normaliz
e=1 filters=512
size=1 stride=1
pad=1
activation=leak
y
```

[convolutional]  
batch\_normaliz  
e=1 size=3  
stride=1 pad=1  
filters=1024  
activation=leak  
y

[convolutional]  
batch\_normaliz  
e=1 filters=512  
size=1 stride=1  
pad=1  
activation=leak  
y

[convolutional]  
batch\_normaliz  
e=1 size=3  
stride=1 pad=1  
filters=1024  
activation=leak  
y

[convolutional]  
batch\_normaliz  
e=1 filters=512  
size=1 stride=1  
pad=1  
activation=leak  
y

[convolutional]  
batch\_normaliz  
e=1 size=3  
stride=1 pad=1  
filters=1024  
activation=leak  
y

[convolutional]  
size=1 stride=1

pad=1  
filters=255  
activation=line  
ar

[yolo]  
mask =  
6,7,8  
anchors = 10,13, 16,30, 33,23, 30,61, 62,45, 59,119,  
116,90,  
156,198,  
373,326  
classes=80  
num=9 jitter=.3  
ignore\_thresh =  
.7 truth\_thresh =  
1 random=1

[route]  
layers = -  
4

[convolutional]  
batch\_normaliz  
e=1 filters=256  
size=1 stride=1  
pad=1  
activation=leak  
y

[upsample]  
stride=2  
[route] layers  
= -1, 61

[convolutional]  
batch\_normaliz  
e=1 filters=256  
size=1 stride=1

pad=1  
activation=leak  
y  
[convolutional]  
batch\_normaliz  
e=1 size=3  
stride=1 pad=1  
filters=512  
activation=leak  
y  
[convolutional]  
batch\_normaliz  
e=1 filters=256  
size=1 stride=1  
pad=1  
activation=leak  
y  
[convolutional]  
batch\_normaliz  
e=1 size=3  
stride=1 pad=1  
filters=512  
activation=leak  
y  
[convolutional]  
batch\_normaliz  
e=1 filters=256  
size=1 stride=1  
pad=1  
activation=leak  
y  
[convolutional]  
batch\_normaliz  
e=1 size=3  
stride=1 pad=1  
filters=512  
activation=leak  
y  
[convolutional]  
size=1 stride=1

```
pad=1
filters=255
activation=line
ar
[yolo]
mask =
3,4,5
anchors =
10,13,
16,30,
33,23,
30,61,
62,45,
59,119,
116,90,
156,198,
373,326
classes=80
num=9 jitter=.3
ignore_thresh =
.7 truth_thresh =
1 random=1
```

```
[route]
layers = -
4
```

```
[convolutional]
batch_normaliz
e=1 filters=128
size=1 stride=1
pad=1
activation=leak
y
[upsample]
stride=2
[route] layers
= -1, 36
```



[convolutional]  
batch\_normaliz  
e=1 filters=128  
size=1 stride=1  
pad=1  
activation=leak  
y

[convolutional]  
batch\_normaliz  
e=1 size=3  
stride=1 pad=1  
filters=256  
activation=leak  
y

[convolutional]  
batch\_normaliz  
e=1 filters=128  
size=1 stride=1  
pad=1  
activation=leak  
y

[convolutional]  
batch\_normaliz  
e=1 size=3  
stride=1  
pad=1  
filters=256  
activation=leak  
y

[convolutional]  
batch\_normaliz  
e=1 filters=128  
size=1 stride=1  
pad=1

activation=leaky

[convolutional]  
batch\_normaliz  
e=1 size=3  
stride=1 pad=1  
filters=256  
activation=leaky

[convolutional]  
size=1 stride=1  
pad=1  
filters=255  
activation=linear

[yolo]  
mask =  
0,1,2  
anchors = 10,13, 16,30, 33,23, 30,61, 62,45, 59,119,  
116,90,  
156,198,  
373,326  
classes=80  
num=9 jitter=.3  
ignore\_thresh =  
.7 truth\_thresh =  
1 random=1