

Project Development Phase

Sprint-3 Test Cases

TEAM ID	PNT2022TMID28434
PROJECT NAME	VirtualEye - Life Guard for Swimming Pools to Detect Active Drowning
Maximum Marks	8 Marks

```

1 import re
2 import numpy as np
3 import os
4 from flask import Flask, app, request, render_template, redirect, url_for
5 from tensorflow.keras.models import load_model
6 from tensorflow.keras.preprocessing import image
7 from tensorflow.python.ops.gen_array_ops import concat
8 import cvlib as cv
9 from cvlib.object_detection import draw_bbox
10
11 import cv2
12 import time
13 from playsound import playsound
14 import requests
15
16 #loading the model
17
18 from cloudant.client import Cloudant
19
20 # Authenticate using an IAM API key
21 client = Cloudant.Iam('322143-1664773867-mtn', 'https://322143-1664773867-mtn:322143-1664773867-mtn@cloudant.com', connect=True)
22
23 # Create a database using an initialized client
24 my_database = client.create_database('my_database')
25
26 app = Flask(__name__)
27
28 #default home page or route
29 @app.route('/')
30 def index():
31     return render_template("index.html")
32
33 @app.route('/index.html')
34 def home():
35     return render_template("index.html")
36
37 #registration page
38 @app.route('/register')
39 def register():
40     return render_template("register.html")
41
42 @app.route('/afterreg', methods=['POST'])
43 def afterreg():
44     # x = [x for x in request.form.values()]
45     print(x)
46     data = {
47         'id': x[1], # Setting id is optional
48         'name': x[0],
49         'pass': x[2]
50     }
51     print(data)
52
53 query = {'_id': ('$eq': data['_id'])}
54
55 docs = my_database.get_query_result(query)
56 print(docs)
57

```

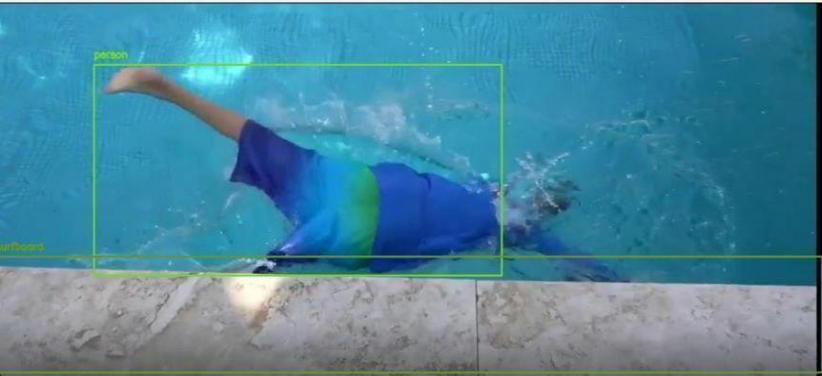
```

In [1]: runfile('C:/Users/Subash V/Desktop/ST-GuidedProject-322143-1664773867-mtn/ST-GuidedProject-322143-1664773867-mtn/app.py', wdir='C:/Users/Subash V/Desktop/ST-GuidedProject-322143-1664773867-mtn/ST-GuidedProject-322143-1664773867-mtn')

2022-11-12 21:33:54.529155: W tensorflow/stream_executor/platform/default/dso_loader.cc:59] Could not load dynamic library 'cudart64_110.dll'; dlerror: cudart64_110.dll not found
2022-11-12 21:33:54.529456: I tensorflow/stream_executor/cuda/cudart_stub.cc:29] Ignoring cudart error: If you do not have a GPU set up on your machine.
* Serving Flask app "app" (lazy loading)
* Environment: production
  Use a production WSGI server instead.
* Debug mode: off
* Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)
127.0.0.1 - - [12/Nov/2022 21:33:22] "GET / HTTP/1.1" 200 -
127.0.0.1 - - [12/Nov/2022 21:33:22] "POST /register HTTP/1.1" 404 -
127.0.0.1 - - [12/Nov/2022 21:33:26] "GET /login HTTP/1.1" 200 -
SubashV@322143-1664773867-mtn:~/ST-GuidedProject-322143-1664773867-mtn$ python app.py
<cloudant.result.QueryResult object at 0x000001F8A306A190>
1
127.0.0.1 - - [12/Nov/2022 21:33:30] "GET /index HTTP/1.1" 200 -
127.0.0.1 - - [12/Nov/2022 21:33:30] "GET /prediction HTTP/1.1" 200 -
1.3489999999999999 s
Boxes: [[184, 185, 807, 384], [10, 363, 1258, 538]] centre: [455.5, 244.5] centre0:
Is he drowning: False
0.4450999999999999 s

```

Real-time object detection



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```
20 #default home page or route
21 @app.route("/")
22 def index():
23     return render_template("index.html")
24
25 @app.route("/index.html")
26 def home():
27     return render_template("index.html")
28
29 #registration page
30 @app.route("/register")
31 def register():
32     return render_template("register.html")
33
34 @app.route("/afterreg", methods=['POST'])
35 def afterreg():
36     x = [x for x in request.form.values()]
37     print(x)
38     data = {
39         'id': x[0], # letting _id is optional
40         'name': x[1],
41         'psw': x[2]
42     }
43     print(data)
44     query = {'_id': {'$eq': data['_id']}}
45
46     docs = my_database.get_query_result(query)
47     print(docs)
```

Console (38 x)

```
bbox: [[149, 88, 790, 394], [9, 365, 1274, 539]] centre: [469.5, 241.0] centre0: [470.0, 240.5]
Is he drowning: False
2.4292216380904395 s
bbox: [[149, 88, 787, 393], [0, 382, 1276, 539]] centre: [468.0, 240.5] centre0: [469.5, 241.0]
Is he drowning: False
2.71708059008242 s
bbox: [[148, 89, 790, 393], [5, 383, 1283, 539]] centre: [469.0, 241.0] centre0: [468.0, 240.5]
Is he drowning: False
3.019012559907941 s
bbox: [[148, 89, 791, 393], [5, 383, 1278, 538]] centre: [469.5, 241.0] centre0: [469.0, 241.0]
Is he drowning: False
3.303864002227783 s
bbox: [[147, 89, 791, 393], [2, 381, 1284, 538]] centre: [469.0, 241.0] centre0: [469.5, 241.0]
Is he drowning: False
3.613197808241577 s
bbox: [[148, 89, 788, 393], [-1, 381, 1281, 538]] centre: [468.0, 241.0] centre0: [469.0, 241.0]
Is he drowning: False
3.922572611714504 s
bbox: [[147, 88, 788, 393], [-4, 364, 1284, 536]] centre: [467.5, 241.0] centre0: [468.0, 241.0]
Is he drowning: False
4.242513431777954 s
bbox: [[147, 88, 787, 392], [-14, 357, 1290, 538]] centre: [467.0, 240.8] centre0: [467.5, 241.0]
Is he drowning: False
```