

Date	18 November 2022
TeamID	PNT2022TMID45992
ProjectName	Efficient Water Quality Analysis and Prediction Using Machine Learning
MaximumMarks	8Marks

SPRINT-4

SOURCE

CODE

HOME

:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <link rel="stylesheet" href="menu.css">
  <title>Product Landing Page</title>
</head>
<body>
  <nav>
    <div class="logo">Brand</div>
    <!-- toggle menu button -->
    <span class="menubtn" onclick="openNav()">&#9776;</span>

    <div class="navLinks">
      <ul>
        <li><a href="#">Home</a></li>
        <li><a href="#">About</a></li>
```

```

        <li><a href="#">Services</a></li>
        <li><a href="#">Contact</a></li>
        <button type="button">Login</button>
    </ul>
</div>
</nav>

<!-- responsive side navbar -->
<div class="sideNav" id="sidenav">
    <a href="#" class="closeBtn" onclick="closeNav()"> &#10006;</a>
    <a href="#">Home</a>
    <a href="#">About</a>
    <a href="#">Services</a>
    <a href="#">Contact</a>
    <a href="#"><button type="button">Login</button> </a>
</div>

<!-- Header content with banner image -->
<div class="row">
    <div class="column1">
        <h1>Responsive Design</h1>
        <p>Contact us for responsive web design to grow your business!</p>
        <button>PURCHASE</button>
    </div>
    <div class="column2">
        
    </div>
</div>

<!-- javascript to make side menu appear -->

```

```

<script>
function openNav() {
    document.getElementById("sidenav").style.width =
        "50%";
}
function closeNav() {
    document.getElementById("sidenav").style.width =
        "0%";
}
</script>
</body>
</html>

```

LOGIN:

```

<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <link rel="stylesheet" href="menu.css">
    <title>Product Landing Page</title>
</head>
<body>
    <nav>
        <div class="logo">Brand</div>
        <!-- toggle menu button -->
        <span class="menubtn" onclick="openNav()">&#9776;</span>

        <div class="navLinks">
            <ul>
                <li><a href="#">Home</a></li>

```

```

        <li><a href="#">About</a></li>
        <li><a href="#">Services</a></li>
        <li><a href="#">Contact</a></li>
        <button type="button">Login</button>
    </ul>
</div>
</nav>

<!-- responsive side navbar -->
<div class="sideNav" id="sidenav">
    <a href="#" class="closeBtn" onclick="closeNav()"> &#10006;</a>
    <a href="#">Home</a>
    <a href="#">About</a>
    <a href="#">Services</a>
    <a href="#">Contact</a>
    <a href="#"><button type="button">Login</button> </a>
</div>

<!-- Header content with banner image -->
<div class="row">
    <div class="column1">
        <h1>Responsive Design</h1>
        <p>Contact us for responsive web design to grow your business!</p>
        <button>PURCHASE</button>
    </div>
    <div class="column2">
        
    </div>
</div>

<!-- javascript to make side menu appear -->

```

```
<script>

function openNav() {
    document.getElementById("sidenav").style.width = "50%";
}

function closeNav() {
    document.getElementById("sidenav").style.width = "0%";
}

</script>
</body>
</html>
```

REGISTER:

```
<!DOCTYPE html>
<html lang="zxx">

<head>
    <title>Water Quality Prediction</title>
    <!-- Meta tag Keywords -->
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <meta charset="UTF-8" />
    <meta name="keywords"
        content="Login Form" />
    <link
href="//fonts.googleapis.com/css2?family=Poppins:wght@300;400;500;600&display=swap"
rel="stylesheet">
    <script src="https://kit.fontawesome.com/af562a2a63.js"
crossorigin="anonymous"></script>
    <link type="text/css" rel="stylesheet" href="{ { url_for('static', filename='css/style1.css')
}}" />
</head>
```

<body>

<!-- form section start -->

<section class="w3l-mockup-form">

<div class="container">

<!-- /form -->

<div class="workinghny-form-grid">

<div class="main-mockup">

<div class="alert-close">

</div>

<div class="w3l_form align-self">

<div class="left_grid_info">

</div>

</div>

<div class="content-wthree">

<h2>Register Now</h2>

<p></p>

<form action="/add_user" method="post">

<input type="text" class="name" name="name" required
placeholder="Name">

<input type="email" class="email" name="email" required
placeholder="Email">

<input type="password" class="password" name="password" required
placeholder="Password">

<button name="submit" class="btn" type="submit">Register</button>

</form>

<div class="social-icons">

<p>Have an account! Login.</p>

```
        </div>
    </div>
</div>
</div>
<!-- //form -->
</div>
</section>
<!-- //form section start -->
```

```
<script>
    $(document).ready(function (c) {
        $('alert-close').on('click', function (c) {
            $('.main-mockup').fadeOut('slow', function (c) {
                $('.main-mockup').remove();
            });
        });
    });
</script>
</body>
</html>
```

INDEX:

```
<!DOCTYPE html>
<html lang="en">
```

```
<head>
    <meta charset="utf-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1">

    <!-- The above 3 meta tags *must* come first in the head; any other head content must
    come *after* these tags -->
```

<title>Water Quality Prediction</title>

<link href="https://fonts.googleapis.com/css?family=Lato:400,700" rel="stylesheet">

<link type="text/css" rel="stylesheet" href="{ { url_for('static',
filename='css/bootstrap.min.css') } }" />

<link type="text/css" rel="stylesheet" href="{ { url_for('static', filename='css/style.css') } }"
>

<style>

#booking

{

font-family: 'Lato', sans-serif;

background: url(../static/background.jpg);

background-size: cover;

background-position: center;

color: #2c3b40;

}

</style>

<!---->

<!-- HTML5 shim and Respond.js for IE8 support of HTML5 elements and media queries
-->

<!-- WARNING: Respond.js doesn't work if you view the page via file:// -->

<!--[if lt IE 9]>

<script
src="https://oss.maxcdn.com/html5shiv/3.7.3/html5shiv.min.js"></script>

<script src="https://oss.maxcdn.com/respond/1.4.2/respond.min.js"></script>

<script src="https://unpkg.com/aos@2.3.1/dist/aos.js"></script>

<!-- ===== GSAP CDN ===== -->

<div class="form-group">

```
        <span class="form-label">ph:</span>

        <input type="text" class="form-control" name="ph"
placeholder="Enter value" required="true">

        <span class="select-arrow"></span>

    </div>

</div>

<!Year>

<div class="col-md-4">

    <div class="form-group">

        <span class="form-label">Hardness: </span>

        <input type="text" class="form-control" name="Hardness"
placeholder="Enter value" required="true">

        <span class="select-arrow"></span>

    </div>

</div>

<!Month>

<div class="col-md-4">

    <div class="form-group">

        <span class="form-label">Solids:</span>

        <input type="text" class="form-control" name="Solids"
placeholder="Enter value" required="true">

        <span class="select-arrow"></span>

    </div>

</div>

<! Date>

</div>

<div class="row">
```

```
<div class="col-md-4">

  <div class="form-group">

    <span class="form-label">Chloramines:</span>

    <input type="text" class="form-control" name="Chloramines"
placeholder="Enter value" required="true">

    <span class="select-arrow"></span>

  </div>

</div>

<!Year>
```

```
<div class="col-md-4">

  <div class="form-group">

    <span class="form-label">Sulfate:</span>

    <input type="text" class="form-control" name="Sulfate"
placeholder="Enter value" required="true">

    <span class="select-arrow"></span>

  </div>

</div>

<!Month>
```

```
<div class="col-md-4">

  <div class="form-group">

    <span class="form-label">Conductivity:</span>

    <input type="text" class="form-control" name="Conductivity"
placeholder="Enter value" required="true">

    <span class="select-arrow"></span>

  </div>

</div>

<! Date>
```

```
</div>
```

```
<div class="row">
```

```
<div class="col-md-4">
```

```
<div class="form-group">
```

```
<span class="form-label">Organic_carbon:</span>
```

```
<input type="text" class="form-control"
name="Organic_carbon" placeholder="Enter value" required="true">
```

```
<span class="select-arrow"></span>
```

```
</div>
```

```
</div>
```

```
<!Year>
```

```
<div class="col-md-4">
```

```
<div class="form-group">
```

```
<span class="form-label">Trihalomethanes:</span>
```

```
<input type="text" class="form-control"
name="Trihalomethanes" placeholder="Enter value" required="true">
```

```
<span class="select-arrow"></span>
```

```
</div>
```

```
</div>
```

```
<!Month>
```

```
<div class="col-md-4">
```

```
<div class="form-group">
```

```
<span class="form-label">Turbidity:</span>
```

```
<input type="text" class="form-control" name="Turbidity"
placeholder="Enter value" required="true">
```

```
<span class="select-arrow"></span>
```

```
</div>
```

```
</div>
```

```
<! Date>
```

</div>

<div class="row">

<div class="col-md-4">

<div class="form-group">

nph:

<input type="text" class="form-control" name="nph"
placeholder="Enter value" required="true">

</div>

</div>

<!Year>

<div class="col-md-4">

<div class="form-group">

nHardness:

<input type="text" class="form-control" name="nHardness"
placeholder="Enter value" required="true">

</div>

</div>

<!Month>

<div class="col-md-4">

<div class="form-group">

wph:

<input type="text" class="form-control" name="wph"
placeholder="Enter value" required="true">

</div>

</div>

<! Date>

</div>

<div class="row">

<div class="col-md-4">

<div class="form-group">

wHardness:

<input type="text" class="form-control" name="wHardness"
placeholder="Enter value" required="true">

</div>

</div>

<!Year>

<div class="col-md-4">

<div class="form-group">

wSolids:

<input type="text" class="form-control" name="wSolids"
placeholder="Enter value" required="true">

</div>

</div>

<!Month>

<div class="col-md-4">

<div class="form-group">

wqi:

<input type="text" class="form-control" name="wqi"
placeholder="Enter value" required="true">

</div>

</div>

<! Date>

</div>

<!--Year,Month,Date end-->

<div class="form-btn">

<button class="submit-btn">Predict</button>

</div>

<!Button>

{% if prediction_text == 0 % }

<h2 >" Not Potable, the water can't be drink "</h2>

{% elif prediction_text == 1 % }

<h2 >" Potable, the water can be drink "</h2>

{% endif % }

</center>

</form>

<!--Form end-->

</div>

<!Booking form>

</div>

</div>

```

        </div>

    </div>

</div>

</p>

</body>

</html>

```

APP.PY:

```

from flask import Flask, render_template, request

import requests

import requests

# NOTE: you must manually set API_KEY below using information retrieved from your
IBM Cloud account.

import requests

# NOTE: you must manually set API_KEY below using information retrieved from your
IBM Cloud account.

API_KEY = "nFFWACn7pVNTQWlnb7pusoXVa63g0vFEq_8Y2x2pxZSE"

token_response = requests.post('https://iam.cloud.ibm.com/identity/token', data={"apikey":
API_KEY, "grant_type": 'urn:ibm:params:oauth:grant-type:apikey'})

mltoken = token_response.json()["access_token"]

header = {'Content-Type': 'application/json', 'Authorization': 'Bearer ' + mltoken}

app = Flask(__name__)

@app.route('/')
def index():
    return render_template('index.html')

@app.route('/predict', methods = ['POST'])

```



```
def predict():
```

```
    ph = request.form['ph']
```

```
    Hardness = request.form['Hardness']
```

```
    Solids = request.form['Solids']
```

```
    Chloramines = request.form['Chloramines']
```

```
    Sulfate = request.form['Sulfate']
```

```
    Conductivity = request.form['Conductivity']
```

```
    Organic_carbon = request.form['Organic_carbon']
```

```
    Trihalomethanes = request.form['Trihalomethanes']
```

```
    Turbidity = request.form['Turbidity']
```

```
    nph = request.form['nph']
```

```
    nHardness = request.form['nHardness']
```

```
    wph = request.form['wph']
```

```
    wHardness = request.form['wHardness']
```

```
    wSolids = request.form['wSolids']
```

```
    wqi = request.form['wqi']
```

```
    t =
```

```
    [[float(ph),float(Hardness),int(Solids),float(Chloramines),float(Sulfate),float(Conductivity),float(Organic_carbon),float(Trihalomethanes),float(Turbidity),int(nph),int(nHardness),float(wph),float(wHardness),float(wSolids),float(wqi)]]
```

```
    payload_scoring = {"input_data": [{"fields":  
    ["f0","f1","f2","f3","f4","f5","f6","f7","f8","f9","f10","f11","f12","f13","f14"]}, {"values":t  
    }]}
```

```
    response_scoring = requests.post('https://us-  
south.ml.cloud.ibm.com/ml/v4/deployments/94d69d4c-4e12-4662-aba9-  
fe193faa3d90/predictions?version=2022-11-07', json=payload_scoring,
```

```
    headers={'Authorization': 'Bearer ' + mltoken})
```

```
print("Scoring response")

payload_scoring = {"input_data": [{"fields":
[["f0","f1","f2","f3","f4","f5","f6","f7","f8","f9","f10","f11","f12","f13","f14"]], "values":t
}]}

pred= response_scoring.json()
output=pred['predictions'][0]['values'][0][0]
print(output)

return render_template("index.html", prediction_text = output)

if __name__ == '__main__':
    app.run(debug = False)
```