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

# HOME:

**SPRINT-4 SOURCE CODE**

<!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">

<img src="https://[www.hmablogs.com/wp-content/uploads/2022/06/banner-img.png"](http://www.hmablogs.com/wp-content/uploads/2022/06/banner-img.png) alt="banner" width="500px">

</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>

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<meta name="viewport" content="width=device-width, initial-scale=1.0">

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<title>Product Landing Page</title>

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</div>

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}

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">

<span class="fa fa-close"></span>

</div>

<div class="w3l\_form align-self">

<div class="left\_grid\_info">

<img src="{{ url\_for('static', filename='images/img.jpg') }}" alt="">

</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! <a href="/login">Login</a>.</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>

<!--<img src="{{url\_for('static', filename='background.png')}}" />-->

<!-- 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/](https://unpkg.com/aos%402.3.1/dist/aos.js)a[os@2.3.1/dist/aos.js"><](https://unpkg.com/aos%402.3.1/dist/aos.js)/script>

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

<script src="https://cdnjs.cloudflare.com/ajax/libs/gsap/3.8.0/gsap.min.js"></script>

<!-- ==== SCRIPT.JS ==== -->

<script src="{{url\_for('static', filename='script.js' )}}" defer></script>

</head>

<body style="background-color:#00ccff">

<div id="booking" class="section">

<div class="section-center">

<div class="container">

<div class="row">

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

<div class="booking-cta">

<h1>Water Quality Prediction</h1>

<p>Let's Find the potability of the water</p>

</div>

</div>

<div class="col-md-7 col-md-offset-1">

<div class="booking-form">

<form action={{ url\_for("predict") }} method="post">

<div class="row">

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

<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">

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

<input type="text" class="form-control" name="nph" 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">nHardness:</span>

<input type="text" class="form-control" name="nHardness" 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">wph:</span>

<input type="text" class="form-control" name="wph" 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">wHardness:</span>

<input type="text" class="form-control" name="wHardness" 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">wSolids:</span>

<input type="text" class="form-control" name="wSolids" 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">wqi:</span>

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

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

</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),fl oat(Organic\_carbon),float(Trihalomethanes),float(Turbidity),int(nph),int(nHardness),float(w ph),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)