

Project Development Phase Delivery of Sprint 4

Date	10 November 2022
Team ID	PNT2022TMID30154
Project Name	Project - Early Detection of Chronic Kidney Disease

USN-7 : As a user, I can view the result for the given input.

Python Flask Code :

```
import numpy as np
import pandas as pd
from flask import Flask, request, render_template
import pickle

app = Flask(__name__)
model=pickle.load(open('CKD.pkl', 'rb'))

@app.route('/')
@app.route('/home')
def home():
    return render_template('Home page.html')

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

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

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

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

    test=[]
    if request.method == 'POST':
        test.append(request.form.get("AGE"))
        test.append(request.form.get("BLOOD_UREA"))
        test.append(request.form.get("BLOOD_GLUCOSE_RANDOM"))

        APPETITE=request.form.get("APPETITE")
        if APPETITE=='YES':
```

```

        test.append(1)
    else:
        test.append(0)
    ANEMIA=request.form.get("ANEMIA")
    if ANEMIA=='YES':
        test.append(1)
    else:
        test.append(0)
    CORONARY_ARTERY_DISEASE=request.form.get("CORONARY_ARTERY_DISEASE")
    if CORONARY_ARTERY_DISEASE=='YES':
        test.append(1)
    else:
        test.append(0)
    PUS_CELL=request.form.get("PUS_CELL")
    if PUS_CELL=='YES':
        test.append(1)
    else:
        test.append(0)
    RED_BLOOD_CELL=request.form.get("RED_BLOOD_CELL")
    if RED_BLOOD_CELL=='YES':
        test.append(1)
    else:
        test.append(0)
    DIABETES_MELLITUS=request.form.get("DIABETES_MELLITUS")
    if DIABETES_MELLITUS=='YES':
        test.append(1)
    else:
        test.append(0)
    PEDAL_EDEMA=request.form.get("PEDAL_EDEMA")
    if PEDAL_EDEMA=='YES':
        test.append(1)
    else:
        test.append(0)
print(test)
test_df=pd.DataFrame(test)
test_df=np.array(test_df).reshape(1, -1)
ans1=model.predict(test_df)
ans2=model.predict(test_df)
value=0
if (ans1=='ckd'): value=1
if value==1:
    answer1="Oops!! You are affected by CHRONIC KIDNEY DISEASE"
    return
render_template('Result1.html',answer1=answer1,ans1=ans1,answer2=ans2)
else:
    answer1="Happy to say, that you are not affected by CHRONIC KIDNEY DISEASE!!!"

```

```
        return
render_template('Result.html',answer1=answer1,ans1=ans1,answer2=ans2)

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

OUTPUT :



HOME

Prediction: Happy to say, that you are not affected by CHRONIC KIDNEY DISEASE!!!



HOME

Prediction: Oops!! You are affected by CHRONIC KIDNEY DISEASE



USN-8 : As a user, I can the view symptoms that matches my health condition.

HTML CODE for chronic kidney disease not affected:

```
<!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">
  <title>RESULT</title>
  <link rel="icon" type="image/x-icon" href="static/images/title.png">
  <link href="static/css/Result.css" rel="stylesheet" type="text/css" />

  <link rel="stylesheet"
href="https://cdn.jsdelivr.net/npm/bootstrap@4.5.3/dist/css/bootstrap.min.css"
  integrity="sha384-
TX8t27EcRE3e/ihU7zmQxVncDAy5uIKz4rEkgIXeMed4M0jlfIDPvg6uqKI2xXr2"
crossorigin="anonymous">

  <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/5.10.0/css/all.min.css"
  integrity="sha512-
PgQMlq+nqFLV4ylk1gwUOgm6CtIIXkkWaiHP/PAIWHzig/1KZSEgKEySh0TCVbHJXCLN7WetD8TFec
Iky75ZfQ=="
  crossorigin="anonymous" />
</head>

<body id='top' style="background-color:#d5ebf7">
  <section class="header_menu" id="header_menu" >
    <div class="container-fluid px-0 shadow">
      <nav class="navbar navbar-expand-lg navbar-light bg-white py-1">
        <a class="navbar-brand pl-5 pl-small-0" >
          
        </a>
        <button class="navbar-toggler" type="button" data-
toggle="collapse" data-target="#navbarSupportedContent"
          aria-controls="navbarSupportedContent" aria-
expanded="false" aria-label="Toggle navigation">
          <span class="navbar-toggler-icon"></span>
        </button>
        <div class="collapse navbar-collapse"
id="navbarSupportedContent">
          <ul class="navbar-nav">
            <li class="nav-item">
              <a class="nav-link" href="/home"
style="color:rgba(19, 88, 179, 0.795)">HOME </a>
            </li>
```

```

        </ul>
      </div>
    </nav>
  </div>
</section>

<script src="https://code.jquery.com/jquery-3.5.1.slim.min.js"
integrity="sha384-
DfXdz2htPH0lsSSs5nCTpuj/zy4C+OGpamoFVy38MVBnE+IbbVYUew+OrCXaRkfj"
crossorigin="anonymous"></script>
<script
src="https://cdn.jsdelivr.net/npm/popper.js@1.16.1/dist/umd/popper.min.js"
integrity="sha384-
9/reFTGAW83EW2RDu2S0VKA1Zap3H66lZ81PoYlFhbGU+6BZp6G7niu735Sk7lN"
crossorigin="anonymous"></script>
<script
src="https://cdn.jsdelivr.net/npm/bootstrap@4.5.3/dist/js/bootstrap.min.js"
integrity="sha384-
w1Q4orYjBQndcko6MimVbzY0tgp4pWB41Z71r30WKz0vr/aWKhXdBNmNb5D92v7s"
crossorigin="anonymous"></script>

<div container>
  <div class="font">
    <p> <sapn style="color: rgb(253, 36, 36);">Prediction: </sapn>
{{answer1}}</p>

    <div class="polaroid-wrapper">
      <div class="polaroid">
        </a>
      </div>
    </div>

    <div class="box1">
      <h6 class="para">We are happy to say that you are not affected
from chronic kidney disease now, and it may
possible in future. So always aware of it and concentrate
in your food habits that you consume and maintain your
good health.
    </h6>
  </div>
</div>
</div>
</body>
</html>

```

CSS Code :

```
*{
  padding: 0;
  margin: 0;
  box-sizing: border-box;
  overflow-x: hidden;
}
@import
url('https://fonts.googleapis.com/css2?family=Montserrat&display=swap');

html,body{
  height: 100%;
  width: 100%;
}
ul li{
  list-style: none;
  font-size: 16px;
  font-family:Arial;
  margin-left:48px;
}
ul li a{
  text-decoration: none;
  color: rgba(19, 88, 179, 0.795);
  font-weight: bold;
}
.container{
  width:1200px;
  height:auto;
  margin:auto;
}
.font{
  font-size: 28px;
  padding: 30px;
  font-family: Cambria, Cochin, Georgia, Times, 'Times New Roman', serif;
  margin-top: 20px;
  font-weight: bold;
  text-align: center;
}
.polaroid-wrapper{
  padding-inline: 100px;
  display: flex;
  align-items: center;
  justify-content: space-evenly;
}
@media screen and (max-width: 664px) {
  .polaroid-wrapper{
    flex-direction: column;
  }
}
```

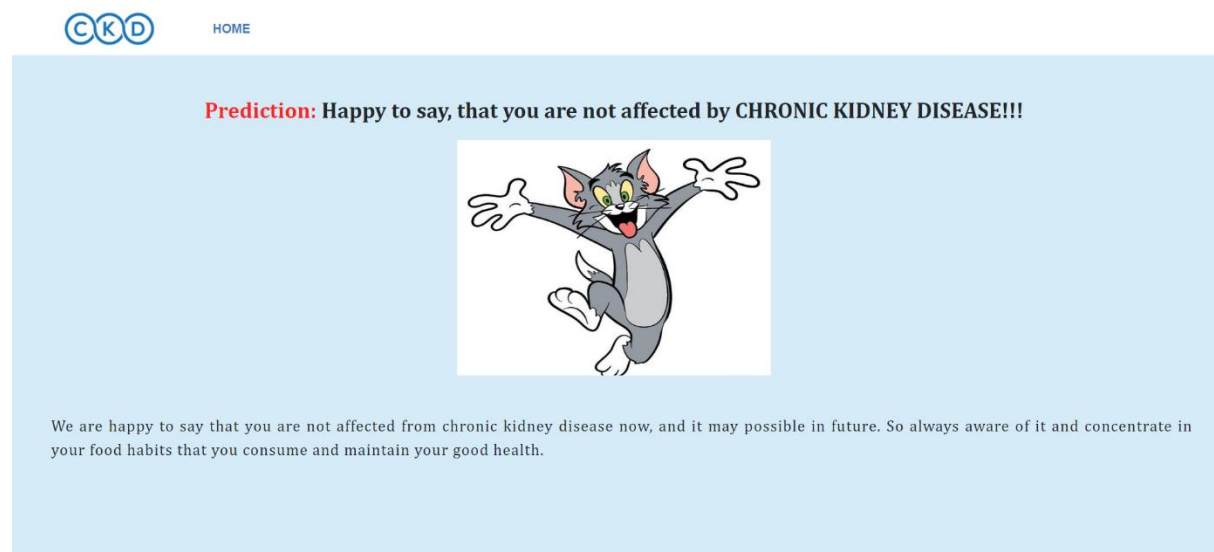
```

}
@media screen and (max-width: 664px) {
  div.polaroid{
    width: 400px;
    height:300px;

  }
}
div.box1 .para{
  font-family: Cambria, Cochin, Georgia, Times, 'Times New Roman', serif;
  font-size: 20px;
  padding-left: 20px;
  line-height: 30px;
  letter-spacing: 1px;
  text-align: justify;
  margin-top:50px;
}

```

OUTPUT :



HTML CODE for chronic kidney disease affected :

```

<!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">
  <title>RESULT</title>

```

```

<link rel="icon" type="image/x-icon" href="static/images/title.png">
<link href="static/css/Result1.css" rel="stylesheet" type="text/css" />

<link rel="stylesheet"
href="https://cdn.jsdelivr.net/npm/bootstrap@4.5.3/dist/css/bootstrap.min.css"
integrity="sha384-
TX8t27EcRE3e/ihU7zmQxVncDAy5uIKz4rEkGIXeMed4M0jlfIDPvg6uqKI2xXr2"
crossorigin="anonymous">

<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/5.10.0/css/all.min.css"
integrity="sha512-
PgQMLq+nqFLV4ylk1gwUOgm6CtIIXkKwaIHp/PAIWHzig/1KZSEgKEysh0TCVbHJXCLN7WetD8TFec
Iky75ZfQ=="
crossorigin="anonymous" />
</head>

<body id='top' style="background-color:#d5ebf7">
<section class="header_menu" id="header_menu" >
<div class="container-fluid px-0 shadow">
<nav class="navbar navbar-expand-lg navbar-light bg-white py-1">
<a class="navbar-brand pl-5 pl-small-0" >

</a>
<button class="navbar-toggler" type="button" data-
toggle="collapse" data-target="#navbarSupportedContent"
aria-controls="navbarSupportedContent" aria-
expanded="false" aria-label="Toggle navigation">
<span class="navbar-toggler-icon"></span>
</button>
<div class="collapse navbar-collapse"
id="navbarSupportedContent">
<ul class="navbar-nav">
<li class="nav-item">
<a class="nav-link" href="/home"
style="color:rgba(19, 88, 179, 0.795)">HOME </a>
</li>
</ul>
</div>
</nav>
</div>
</section>

<script src="https://code.jquery.com/jquery-3.5.1.slim.min.js"
integrity="sha384-
DfXdz2htPH0lsSSs5nCTpuj/zy4C+OGpamoFVy38MVBnE+IbbVYUew+OrCXaRkfj"
crossorigin="anonymous"></script>

```



```

<script
src="https://cdn.jsdelivr.net/npm/popper.js@1.16.1/dist/umd/popper.min.js"
integrity="sha384-
9/reFTGAW83EW2RDu2S0VKAizap3H66lZ7H1PoYlFhbGU+6BZp6G7niu735Sk7lN"
crossorigin="anonymous"></script>
<script
src="https://cdn.jsdelivr.net/npm/bootstrap@4.5.3/dist/js/bootstrap.min.js"
integrity="sha384-
w1Q4orYjBQndcko6MimVbzy0tgp4pWB41Z71lr30WKz0vr/aWKhXdBNmNb5D92v7s"
crossorigin="anonymous"></script>

<div container>
  <div class="font">
    <p> <sapn style="color: rgb(253, 36, 36);">Prediction: </sapn>
{{answer1}}</p>

    <div class="polaroid-wrapper">
      <div class="polaroid">
        </a>
      </div>
    </div>

    <div class="box1">
      <h2 class="hold">APPETITE</h2>
      <h6 class="para">If your appetite is poor, kindly concentrate
on your food habits and eat well.
        Approximately one third of chronic kidney disease patient
complain poor appetite.
      </h6>
    </div>
    <div class="box1">
      <h2 class="hold">ANEMIA</h2>
      <h6 class="para">If you said yes for anemia which means your
blood has a lower than normal amount of red blood cells or
        hemoglobin and it is less common in early stages of ckd.
Proper diet and high protein content food helps you to come
        from anemia.
      </h6>
    </div>
    <div class="box1">
      <h2 class="hold">CORONARY ARTERY DISEASE</h2>
      <h6 class="para">If you said yes for coronary artery disease
which means the more stress in put on your heart when
        kidney doest work well. The heart needs to pump harder to
get blood to kidneys. Change in blood pressure is
        one of the main complication for ckd.
      </h6>
    </div>
  </div>

```

```

        </div>
        <div class="box1">
            <h2 class="hold">PUS CEL</h2>
            <h6 class="para">The presence of pus cell in urine may
indicate the presence of urinary tract infection it may leads to
            other inflammatory kidney disease.
            </h6>
        </div>
        <div class="box1">
            <h2 class="hold">RED BLOOD CELL</h2>
            <h6 class="para">If you said abnormal for red blood cell which
means the count of rbc is decreased and it is the main reason to cause anemia.
And it is early
            warning signs of chronic kidney disease.
            </h6>
        </div>
        <div class="box1">
            <h2 class="hold">DIABETES MELLITUS</h2>
            <h6 class="para">Chronic kidney disease, also called chronic
kidney failure, involves a gradual loss of kidney function.
            If you said yes for diabetes mellitus which is the main
reason for kidney failure and it is a condition
            characterized by high glucose levels which damages the
tiny filtering units of each kidney.
            </div>
        <div class="box1">
            <h2 class="hold">PEDAL EDEMA</h2>
            <h6 class="para">If you said yes for pedal edema it is most
common symptom in chronic kidney disease patients and it occurs
            due to the loss of functioning of kidney.
            </h6>
        </div>
    </div>
</div>
</body>
</html>

```

CSS Code :

```

*{
    padding: 0;
    margin: 0;
    box-sizing: border-box;
    overflow-x: hidden;
}
@import
url('https://fonts.googleapis.com/css2?family=Montserrat&display=swap');


```

```
html,body{
  height: 100%;
  width: 100%;
}
ul li{
  list-style: none;
  font-size: 16px;
  font-family:Arial;
  margin-left:48px;
}
ul li a{
  text-decoration: none;
  color: rgba(19, 88, 179, 0.795);
  font-weight: bold;
}
.container{
  width:1200px;
  height:auto;
  margin:auto;
}
.font{
  font-size: 28px;
  padding: 30px;
  font-family: Cambria, Cochin, Georgia, Times, 'Times New Roman', serif;
  margin-top: 20px;
  font-weight: bold;
  text-align: center;
}
.polaroid-wrapper{
  padding-inline: 100px;
  display: flex;
  align-items: center;
  margin-top: 50px;
  justify-content: space-evenly;
}
@media screen and (max-width: 664px) {
  .polaroid-wrapper{
    flex-direction: column;
  }
}
@media screen and (max-width: 664px) {
  div.polaroid{
    width: 300px;
    height:300px;
  }
}
```

```
div.box1 .hold{
  text-align: left;
  font-size: 23px;
  padding: 20px;
  font-family: Cambria, Cochin, Georgia, Times, 'Times New Roman', serif;
  margin-top: 20px;
  font-weight: bold;
}
div.box1 .para{
  font-family: Cambria, Cochin, Georgia, Times, 'Times New Roman', serif;
  font-size: 20px;
  padding-left: 20px;
  line-height: 30px;
  letter-spacing: 1px;
  text-align: justify;
}
```

OUTPUT :

Prediction: Oops!! You are affected by CHRONIC KIDNEY DISEASE



APPETITE

If your appetite is poor, kindly concentrate on your food habits and eat well. Approximately one third of chronic kidney disease patient complain poor appetite.

ANEMIA

If you said yes for anemia which means your blood has a lower than normal amount of red blood cells or hemoglobin and it is less common in early stages of ckd. Proper diet and high protein content food helps you to come from anemia.