

PNT2022TMID37589

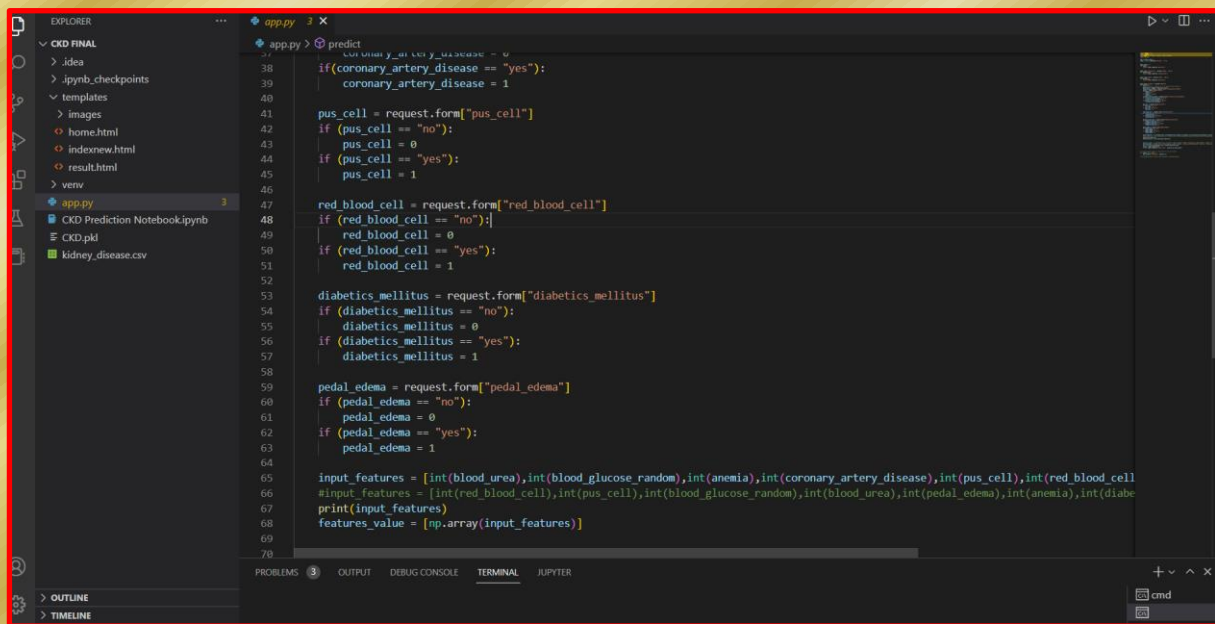
DATE: 12.11.2022

EARLY DETECTION OF CHRONIC KIDNEY DISEASE

SPRINT 3

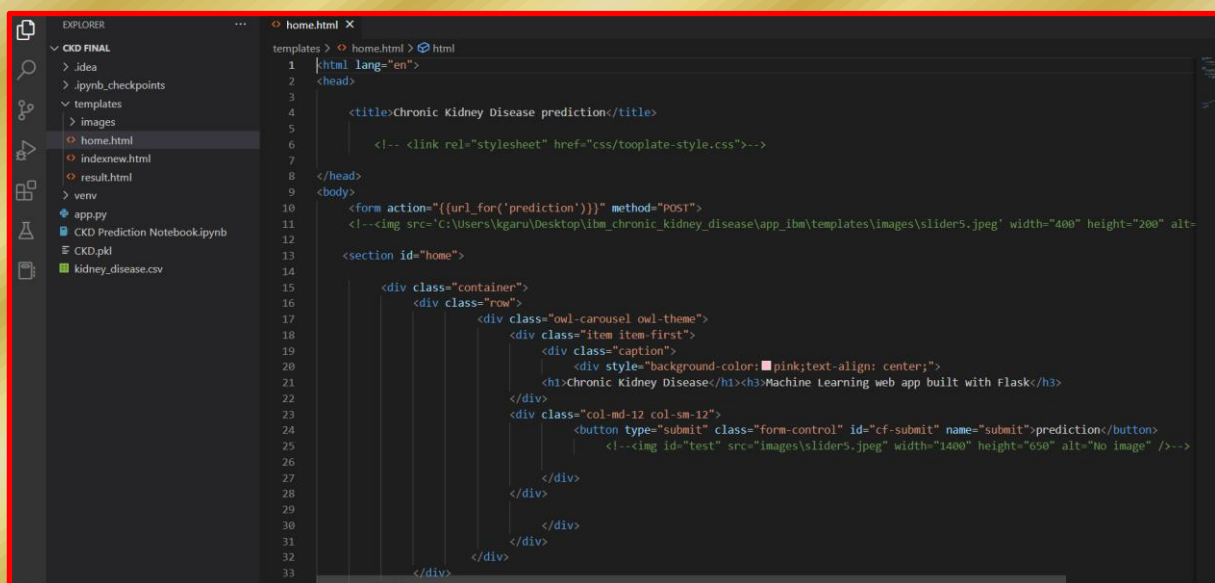
In this sprint we are doing local deployment

App.py code screen



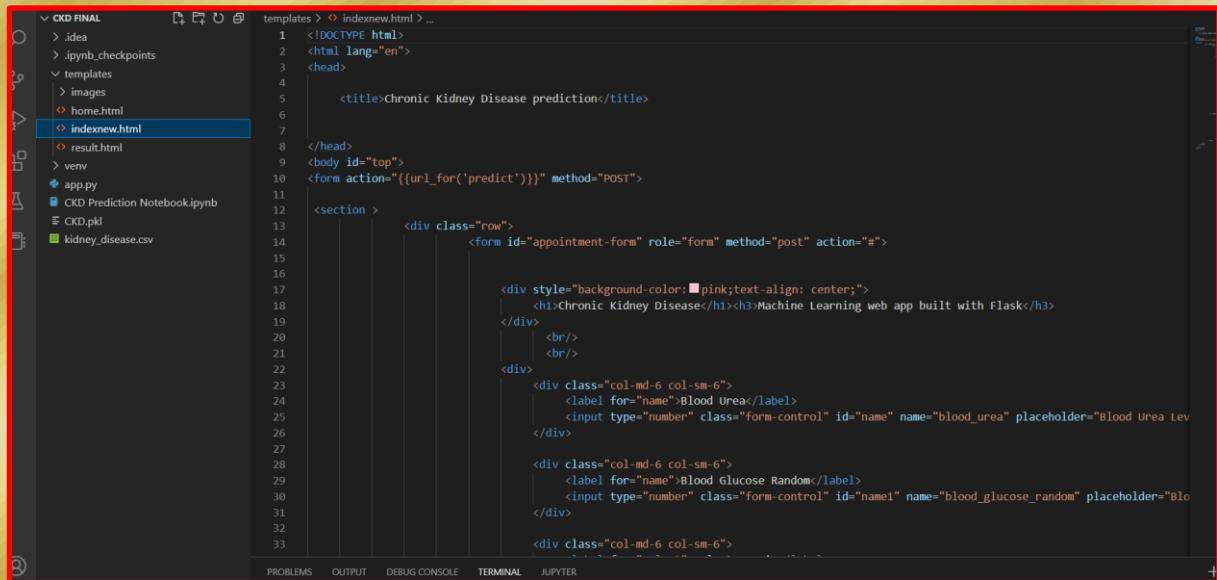
```
37 def predict
38     if(coronary_artery_disease == "yes"):
39         coronary_artery_disease = 1
40
41     pus_cell = request.form["pus_cell"]
42     if (pus_cell == "no"):
43         pus_cell = 0
44     if (pus_cell == "yes"):
45         pus_cell = 1
46
47     red_blood_cell = request.form["red_blood_cell"]
48     if (red_blood_cell == "no"):
49         red_blood_cell = 0
50     if (red_blood_cell == "yes"):
51         red_blood_cell = 1
52
53     diabetics_mellitus = request.form["diabetics_mellitus"]
54     if (diabetics_mellitus == "no"):
55         diabetics_mellitus = 0
56     if (diabetics_mellitus == "yes"):
57         diabetics_mellitus = 1
58
59     pedal_edema = request.form["pedal_edema"]
60     if (pedal_edema == "no"):
61         pedal_edema = 0
62     if (pedal_edema == "yes"):
63         pedal_edema = 1
64
65     input_features = [int(blood_urea),int(blood_glucose_random),int(anemia),int(coronary_artery_disease),int(pus_cell),int(red_blood_cell)
66     #input_features = [int(red_blood_cell),int(pus_cell),int(blood_glucose_random),int(blood_urea),int(pedal_edema),int(anemia),int(diabe
67     print(input_features)
68     features_value = np.array(input_features)]
69
70
```

HOME.HTML CODE SCREEN



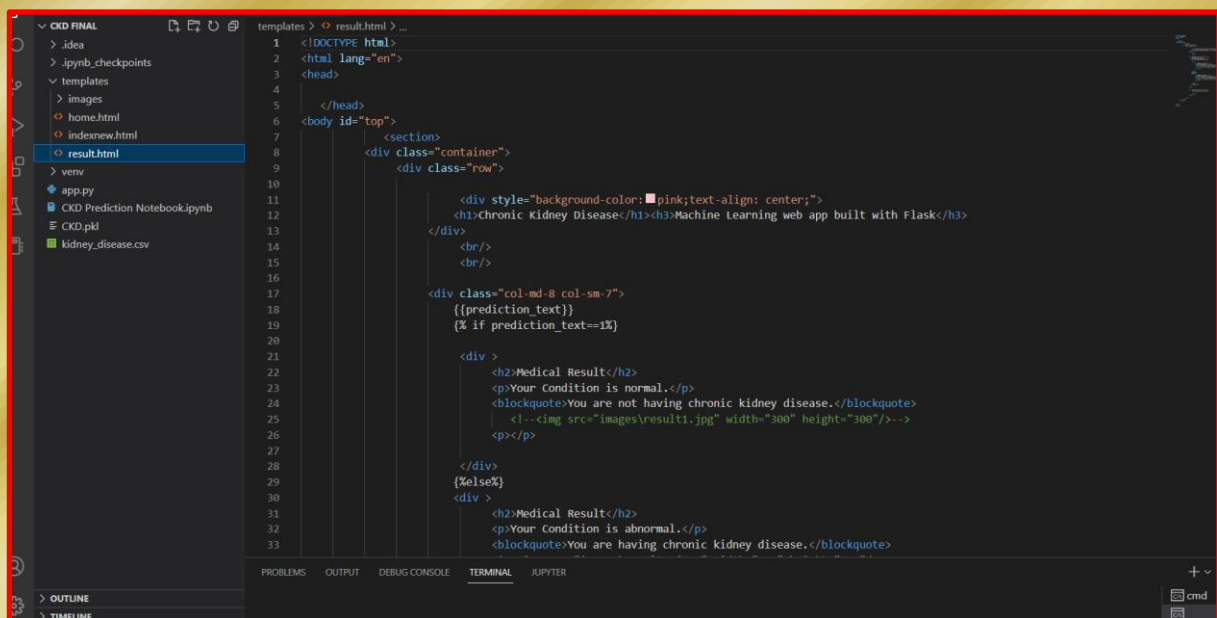
```
1 <html lang="en">
2 <head>
3
4     <title>Chronic Kidney Disease prediction</title>
5
6     <!-- <link rel="stylesheet" href="css/tooplate-style.css">-->
7
8 </head>
9 <body>
10     <form action="{(url_for('prediction'))}" method="POST">
11     <!--<img src='C:\Users\kgaru\Desktop\libm_chronic_kidney_disease\app_ibm\templates\images\slider5.jpeg' width="400" height="200" alt=
12
13     <section id="home">
14
15         <div class="container">
16             <div class="row">
17                 <div class="owl-carousel owl-theme">
18                     <div class="item item-first">
19                         <div class="caption">
20                             <div style="background-color: #pink;text-align: center;">
21                                 <h1>Chronic Kidney Disease</h1><h3>Machine Learning web app built with Flask</h3>
22                             </div>
23                         </div>
24                         <div class="col-md-12 col-sm-12">
25                             <button type="submit" class="form-control" id="cf-submit" name="submit">prediction</button>
26                             <!---->
27                         </div>
28                     </div>
29                 </div>
30             </div>
31         </div>
32     </div>
33
```

INDEXNEW.HTML CODE SCREEN



```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4
5     <title>Chronic Kidney Disease prediction</title>
6
7 </head>
8 <body id="top">
9     <form action="{{url_for('predict')}}" method="POST">
10
11 <section>
12
13     <div class="row">
14         <div class="col-md-6 col-sm-6">
15             <form id="appointment-form" role="form" method="post" action="#">
16
17                 <div style="background-color: #pink;text-align: center;">
18                     <h1>Chronic Kidney Disease</h1><h3>Machine Learning web app built with Flask</h3>
19                 </div>
20                 <br/>
21                 <br/>
22                 <div>
23                     <div class="col-md-6 col-sm-6">
24                         <label for="name">Blood Urea</label>
25                         <input type="number" class="form-control" id="name" name="blood_urea" placeholder="Blood Urea Lev">
26                     </div>
27
28                     <div class="col-md-6 col-sm-6">
29                         <label for="name">Blood Glucose Random</label>
30                         <input type="number" class="form-control" id="name1" name="blood_glucose_random" placeholder="Blood Glucose Random">
31                     </div>
32
33                     <div class="col-md-6 col-sm-6">
```

RESULT.HTML CODE SCREEN



```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4
5 </head>
6 <body id="top">
7     <section>
8         <div class="container">
9             <div class="row">
10
11                 <div style="background-color: #pink;text-align: center;">
12                     <h1>Chronic Kidney Disease</h1><h3>Machine Learning web app built with Flask</h3>
13                 </div>
14                 <br/>
15                 <br/>
16
17                 <div class="col-md-8 col-sm-7">
18                     {{prediction_text}}
19                     {% if prediction_text==1%}
20
21                     <div>
22                         <h2>Medical Result</h2>
23                         <p>Your Condition is normal.</p>
24                         <blockquote>You are not having chronic kidney disease.</blockquote>
25                         
26                         <p></p>
27                     </div>
28
29                     <div>
30                         <h2>Medical Result</h2>
31                         <p>Your Condition is abnormal.</p>
32                         <blockquote>You are having chronic kidney disease.</blockquote>
33                     </div>
```

LOCAL DEPLOYMENT CODE SCREEN

```
CKD FINAL
> .idea
> .ipynb_checkpoints
> templates
  > images
    > home.html
    > indexnew.html
    > result.html
  > venv
  > app.py
  CKD Prediction Notebook.ipynb
  CKD.pkl
  kidney_disease.csv

app.py
38 coronary_artery_disease = 0
39 if(coronary_artery_disease == "yes"):
40     coronary_artery_disease = 1
41
42 pus_cell = request.form["pus_cell"]
43 if (pus_cell == "no"):
44     pus_cell = 0
45 if (pus_cell == "yes"):
46     pus_cell = 1
47
48 red_blood_cell = request.form["red_blood_cell"]
49 if (red_blood_cell == "no"):
50     red_blood_cell = 0
51 if (red_blood_cell == "yes"):
52     red_blood_cell = 1
53
54 diabetics_mellitus = request.form["diabetics_mellitus"]
55 if (diabetics_mellitus == "no"):
56     diabetics_mellitus = 0
57 if (diabetics_mellitus == "yes"):
58     diabetics_mellitus = 1
59
60 pedal_edema = request.form["pedal_edema"]

PROBLEMS 3 OUTPUT DEBUG CONSOLE TERMINAL JUPYTER

ted without feature names
warnings.warn(
127.0.0.1 - - [02/Nov/2022 07:58:52] "POST /predict HTTP/1.1" 200 -

* History restored

Microsoft Windows [Version 10.0.19044.2130]
(c) Microsoft Corporation. All rights reserved.

Microsoft Windows [Version 10.0.19044.2130]
(c) Microsoft Corporation. All rights reserved.

C:\Users\kgaru\Desktop\ckd final>c:\users\kgaru\anaconda3\scripts\activate
(base) C:\Users\kgaru\Desktop\ckd final>
```

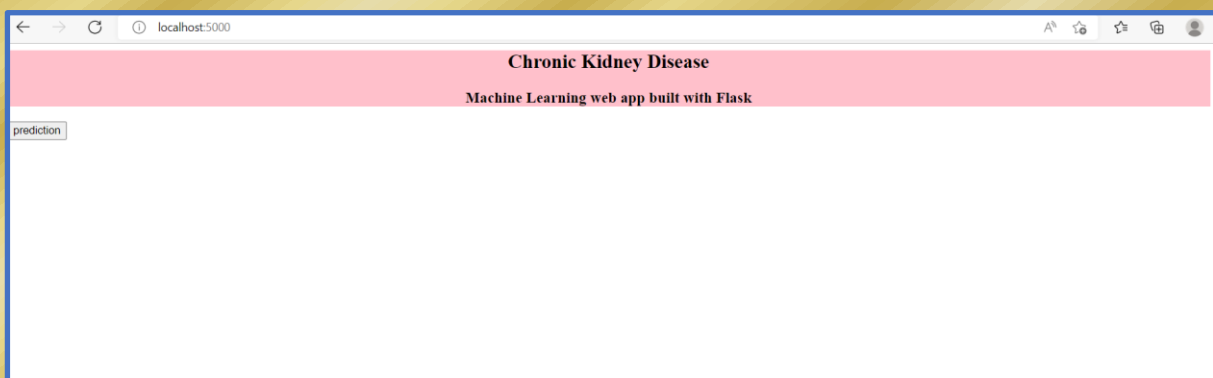
```
Microsoft Windows [Version 10.0.19044.2130]
(c) Microsoft Corporation. All rights reserved.

C:\Users\kgaru\Desktop\ckd final>c:\users\kgaru\anaconda3\scripts\activate

(base) C:\Users\kgaru\Desktop\ckd final>conda activate deployment

(deployment) C:\Users\kgaru\Desktop\ckd final>
```

```
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on http://localhost:5000
Press CTRL+C to quit
* Restarting with stat
c:\Users\kgaru\anaconda3\envs\deployment\lib\site-packages\sklearn\base.py:329: UserWarning: Trying to unpickle estimator DecisionTreeClassifier from
m version 1.0.2 when using version 1.1.2. This might lead to breaking code or invalid results. Use at your own risk. For more info please refer to:
https://scikit-learn.org/stable/model_persistence.html#security-maintainability-limitations
warnings.warn(
c:\Users\kgaru\anaconda3\envs\deployment\lib\site-packages\sklearn\base.py:329: UserWarning: Trying to unpickle estimator RandomForestClassifier from
m version 1.0.2 when using version 1.1.2. This might lead to breaking code or invalid results. Use at your own risk. For more info please refer to:
https://scikit-learn.org/stable/model_persistence.html#security-maintainability-limitations
warnings.warn(
* Debugger is active!
* Debugger PIN: 847-133-482
```



TEST CASE 1: CKD

Chronic Kidney Disease

Machine Learning web app built with Flask

prediction

Chronic Kidney Disease

Machine Learning web app built with Flask

Blood Urea | 90
Blood Glucose Random | 157
Select Anemia | no ▾
Select Coronary Artery Disease | yes ▾
Select Pus Cell | yes ▾
Select Red Blood Cell | no ▾
Select Diabetes Mellitus | yes ▾
Select Pedal Edema | yes ▾
predict

Chronic Kidney Disease

Machine Learning web app built with Flask

[0]

Medical Result

Your Condition is abnormal.

You are having chronic kidney disease.

TEST CASE 2: NO CKD

Chronic Kidney Disease

Machine Learning web app built with Flask

prediction

Chronic Kidney Disease

Machine Learning web app built with Flask

Blood Urea
Blood Glucose Random
Select Anemia
Select Coronary Artery Disease
Select Pus Cell
Select Red Blood Cell
Select Diabetes Mellitus
Select Pedal Edema

Chronic Kidney Disease

Machine Learning web app built with Flask

[1]

Medical Result

Your Condition is normal.

You are not having chronic kidney disease.

TEST CASE 3: CKD

Chronic Kidney Disease

Machine Learning web app built with Flask

prediction

Chronic Kidney Disease

Machine Learning web app built with Flask

Blood Urea |
Blood Glucose Random |
Select Anemia |
Select Coronary Artery Disease |
Select Pus Cell |
Select Red Blood Cell |
Select Diabetes Mellitus |
Select Pedal Edema |

Chronic Kidney Disease

Machine Learning web app built with Flask

[0]

Medical Result

Your Condition is abnormal.

You are having chronic kidney disease.

TEST CASE 4: NO CKD

Chronic Kidney Disease

Machine Learning web app built with Flask

prediction

Chronic Kidney Disease

Machine Learning web app built with Flask

Blood Urea
Blood Glucose Random
Select Anemia
Select Coronary Artery Disease
Select Pus Cell
Select Red Blood Cell
Select Diabetes Mellitus
Select Pedal Edema

Chronic Kidney Disease

Machine Learning web app built with Flask

[1]

Medical Result

Your Condition is normal.

You are not having chronic kidney disease.

TEST CASE 5: NO CKD

Chronic Kidney Disease

Machine Learning web app built with Flask

prediction

Chronic Kidney Disease

Machine Learning web app built with Flask

Blood Urea
Blood Glucose Random
Select Anemia
Select Coronary Artery Disease
Select Pts Cell
Select Red Blood Cell
Select Diabetes Mellitus
Select Pedal Edema

Chronic Kidney Disease

Machine Learning web app built with Flask

[1]

Medical Result

Your Condition is normal.

You are not having chronic kidney disease.