Data Intake Report

Name: Stroke Prediction
Report date: 17/10/2021
Internship Batch: LISUM04
Version: 1.0
Data intake by: Mohammed Wahba
Data intake reviewer:
Data storage location:

Tabular data details:

Total number of observations	5110
Total number of features	12
Base format of the file	.csv
Size of the data	309 KB

Note: Replicate same table with file name if you have more than one file.

Proposed Approach:
- Mention approach of dedup validation (identification)

  The gender column had one unidentifiable category. And label encoder had to be used to convert the strings into 0 or 1.

- Mention your assumptions (if you assume any other thing for data quality analysis)

  Since the work type feature was correlated to the age feature it can be removed. But it was not removed as it will not affect the prediction.

```python
from sklearn.model_selection import train_test_split
from sklearn.linear_model import LogisticRegression
from sklearn.tree import DecisionTreeClassifier
from sklearn.metrics import confusion_matrix, accuracy_score, classification_report
import pickle

x_train,x_test,y_train,y_test = train_test_split(x,y,test_size=0.2,random_state=0)
```

```python
model= LogisticRegression()
```

```python
model.fit(x_train, y_train)
```

3]: LogisticRegression()

```python
model.score(x_train, y_train)
```

5]: 0.9522994129158513

```python
predit= model.predict(x_test)
print(predit)
```

[0 0 0 ... 0 0 0]

```python
pickle.dump(model, open('model.pkl','wb'))
```

```python
from flask import Flask, render_template, request
import joblib
import os
import  numpy as np
import pickle

app= Flask(__name__)

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

@app.route("/result",methods=['POST','GET'])
def result():
    gender=int(str(request.form['gender']))
    age=int(request.form['age'])
    hypertension=int(request.form['hypertension'])
    heart_disease = int(request.form['heart_disease'])
    ever_married = int(request.form['ever_married'])
    work_type = int(request.form['work_type'])
    Residence_type = int(request.form['Residence_type'])
    avg_glucose_level = float(request.form['avg_glucose_level'])
    bmi = float(request.form['bmi'])
    smoking_status = int(request.form['smoking_status'])

    x=np.array([gender,age,hypertension,heart_disease,ever_married,work_type,Residence_type,
                avg_glucose_level,bmi,smoking_status]).reshape(1,-1)

    model = pickle.load(open('model.pkl', 'rb'))

    prediction=model.predict(x)

    # for No Stroke Risk
    if prediction==0:
        return render_template('nostroke.html')
    else:
        return render_template('stroke.html')

if __name__=="__main__":
    app.run(debug=True,port=5000)
```

```html
1    <!doctype html>
2    <html lang="en">
3
4    <head>
5        <!-- Required meta tags -->
6        <meta charset="utf-8">
7        <meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">
8        <!-- Bootstrap CSS -->
9        <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css" integrity="sha384-Gn5384xqQ1aoWXA+058RXPxPg6fy4IWvTNh0E263XmFcJlSAwiGgFAW/
10       <title>Diagnosis</title>
11   </head>
12   <nav class="navbar navbar-dark bg-dark">
13       <a class="navbar-brand" href="#">Stroke Risk Diagnosis</a>
14       <button class="navbar-toggler" type="button" data-toggle="collapse" data-target="#navbarNav" aria-controls="navbarNav" aria-expanded="false" aria-label="Toggle navigation">
15           <span class="navbar-toggler-icon"></span>
16       </button>
17       <div class="collapse navbar-collapse" id="navbarNav">
18           <ul class="navbar-nav">
19               <li class="nav-item active">
20                   <a class="nav-link" href="/">Home</a>
21               </li>
22               <li class="nav-item">
23                   <a class="nav-link" href="/about">About</a>
24               </li>
25           </ul>
26       </div>
27   </nav>
28   <body>
29
30       <div class="jumbotron hero-nature">
31           <h1 class="hero-title">You have been diagnosed with Stroke Risk</h1>
32           <p>The algorithm has diagnosed you with Stroke Risk based on your inputs. Please consult a Doctor.</p>
33       </div>
34       <style>
35       div.jumbotron.hero-nature {
36           color: white;
37           text-align: center;
38           background: url('bg.jpg');
39           background-size: contain;
40           background-repeat: no-repeat;
```

home.html X

templates › ‹› home.html › ⬡ html › ⬡ nav.navbar.navbar-dark.bg-dark.navbar-fixed-top › ⬡ div#navbarNav.collapse.navbar-collapse › ⬡ ul.navbar-nav › ⬡ li.nav-item.active

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10      <title>Home</title>
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12
13  <nav class="navbar navbar-dark bg-dark navbar-fixed-top">
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25              </li>
26          </ul>
27      </div>
28  </nav>
29
30  <body>
31
32      <div class="container-fluid">
33          <div class="col-lg-12">
34              <form action="{{ url_for('result') }}" method="post">
35                  <br>
36                  <br>
37                  <div class="form-group">
38                      <div class="row">
39                          <div class="col-lg-4 col-md-4">
40                              <label for="gender">gender</label>
```

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            <li class="nav-item">
                <a class="nav-link" href="/about">About</a>
            </li>
        </ul>
    </div>
</nav>
<body>

    <div class="jumbotron hero-nature">
        <h1 class="hero-title">You have been diagnosed with no Stroke Risk. Congratulations</h1>
        <p>The algorithm has diagnosed you with no Stroke Risk based on your inputs. However it might be better to talk to a doctor regardless.</p>
    </div>
    <style>
    div.jumbotron.hero-nature {
        color: white;
        text-align: center;
        background: url('bg.jpg');
        background-size: contain;
```