Name: <Yena Lee>

Report date: <Jan 4, 2023>

Internship Batch:<LISUM16>

1. Develop prediction model (Random Forest Model)

```
# Select independent and dependent vairables\
X = df[["City", "Gender", "Age", "Income"]]
y = df["Illness"]

# Splting the data into traing and testing
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)

# Feature scaling
sc = StandardScaler()
X_train = sc.fit_transform(X_train)
X_test = sc.transform(X_test)

# model
classifier = RandomForestClassifier()

# fit model
classifier.fit(X_train, y_train)

# pickle
pickle.dump(classifier, open("model.pkl", "wb"))
```

2. Deployment

```
app = Flask(__name__)

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

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

@app.route("/predict", methods = ['POST'])
def predict():
    float_features = [float(x) for x in request.form.values()]
    features = [np.array(float_features)]
    prediction = model.predict(features)

    return render_template("index.html", prediction_text = "Is the preson Ill? (Yes or No)  {}".format(prediction))


if __name__ == '__main__':
    app.run(port = 3000, debug=True)
```

3. Html file

```
<body>
    <div class = "login">
        <h1 class="text-center">
            Illness prediction
        </h1>

        <from action="{{ url_for('predict')}}"method="post">
            <input type = "text" name = "City" placeholder="Austin(1)/Boston(2)/Dallas(3)/Los Angeles(4)/Mountain View(5)
            <input type = "text" name = "Gender" placeholder = "Male(0)/Female(1)" required = "required"/>
            <input type = "text" name = "Age" placeholder = "age" required = "required"/>
            <input type = "text" name = "Income" placeholder = "income" required = "required"/>

            <button type = "submit" class = "btn btn-primary btn-block btn-large">predict</button>
        </from>

        {{prediction_text}}

    </div>
</body>
```

4. Web

5. Heroku

- Install gunicorn
- $ touch Procfile
- $ pip freeze > requirements.txt