VIRTUAL DATA INTERNSHIP

NAME: ONIFADE MICHAEL

BATCH CODE: LISUM32

DATE: 29TH APRIL 2024

SUBMITTED TO: DATA GLACIER

Introduction

This project aims at the deployment of a machine learning model for data that expresses sales according to the type of advertisement and the size of its associated cost using a Flask framework. The proposed workflow is shown in diagram 1.1 while the data information is showcased in table 1.1

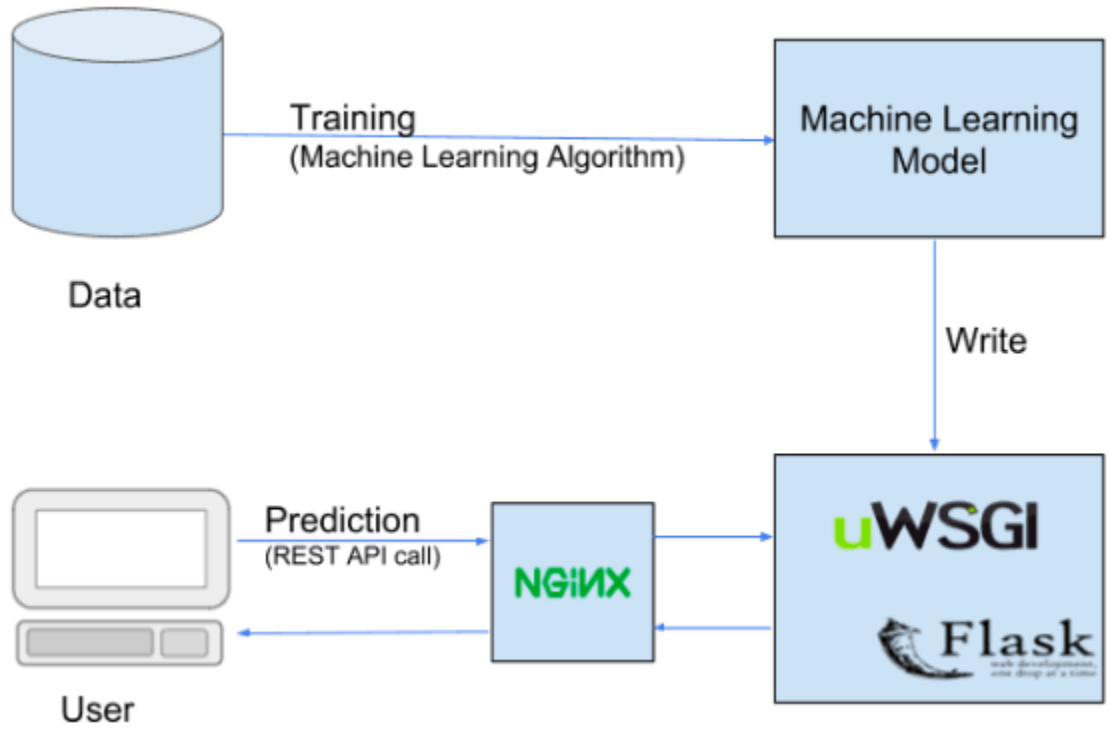

Diagram 1.1 Application Workflow

Table Data Details

Total number of observations	200
Total number of files	1
Total number of features	4
Base format of the file	Csv
Size of the data	4KB

Table 1.1 Dataset Information

The process for the deployment is summarized as follows

1) Data import

2) Model Building

3) Turning Model into web application using flask

app.py > ...

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

# Load the trained model

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

app = Flask(__name__)

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

@app.route('/predict', methods=['POST'])
def predict_sales():
    data = request.get_json()

    tv = float(data['tv'])
    radio = float(data['radio'])
    newspaper = float(data['newspaper'])

    # Make prediction
    prediction = model.predict(np.array([[tv, radio, newspaper]]))

    return jsonify({'projected sales revenue': prediction[0]})

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

Final output