# Smart City traffic management system:

These type of trafficking is always related to a concerned part in any programming language because I realize that this is the condition when a big data with error occurs not only the system of control of managing the extensions are shown but to either get the data from every city or when with the unseen mobility is fetched. The help of documentation like editing and tools tabulating is only when the data is proper but have a condition like saving and persuading the accessible format to all the developing cities.Satisfactory, cumulative and depth of this project is  callable but conferencing is the most relatable topic  also necessary government. Just in a part of measures great learning is always a prompt in this project.

 **I can also share the major points related to this project:**

1)  Traffic control management, Formatting, Theory and command line.

2) Prediction, Normalization in 2D.

3) Addition of tools,

4) Binding of systematic errors,

5) Conferencing and subordinating the parts,

6) Extensions- Pytorch, SQLlite.

7) Programming Languages-SQL, SQLlite, Python and Java.

8) Versions-  SQL-15.0.35.45v, Python- 3.13 etc.

9) Future predictions and outcomes.

Already the details are seen in a very brief manner, but the share points in any private management system are for viewing and carting the versions of the learning any kind of topics and subjects which is relatable and re-considerable like this. Again, the condition is only for the access of trafficking system. Copies and recalling the formatting structure like-Flow chart is a major part. Distributing the outcome/output of data should be changeable because updation is also necessary. Objective of this project is traffic signal management in smart cities. There are commonly major cities in which we can ensure that the updation of signals are right to be maintained.

**For example-**

1)We can subordinate the traffic management system with the help of signals, we can go through some datasets and some theories.

2) Now for a purpose there are major points seen in a car management system.

3) Smart city evaluation.

4) Speed management system with data driven approaches.

5) Ambulances and E-Helpline numbers.

6) GPS tracking system etc.

The major part is code  which is in-built in a comprehensive manner.

```python
import pandas as pd

df = pd.read_csv("/kaggle/input/smart-city-traffic-patterns/train_aWnotuB.csv")
df
```

```python
import numpy as np
df.info()
```

# EDA

```python
df.isnull().sum()
```

```python
df.duplicated()
```

```python
df = df.drop_duplicates()
df
```

Fig.1.1 (Code)

Designing a dynamic traffic management system that adapts to peak traffic hours and efficiently handles the increased load during those hours.

```python
df['HourOfDay'] = df['DateTime'].dt.hour
df.head()
```

```python
peak_traffic_hours = df[(df['HourOfDay'] >= 7) & (df['HourOfDay'] <= 10)]  # Assumed peak traffic hours from 7 AM to 10 AM

# Visualize peak traffic hours
plt.figure(figsize=(12, 6))
plt.plot(df['DateTime'], df['Vehicles'], label='Traffic Counts')
plt.scatter(peak_traffic_hours['DateTime'], peak_traffic_hours['Vehicles'], color='purple', label='Peak Traffic Hours')
plt.xlabel('Date')
plt.ylabel('Traffic Counts')
plt.title('Peak Traffic Hours')
plt.legend()
plt.grid(True)
plt.show()
```
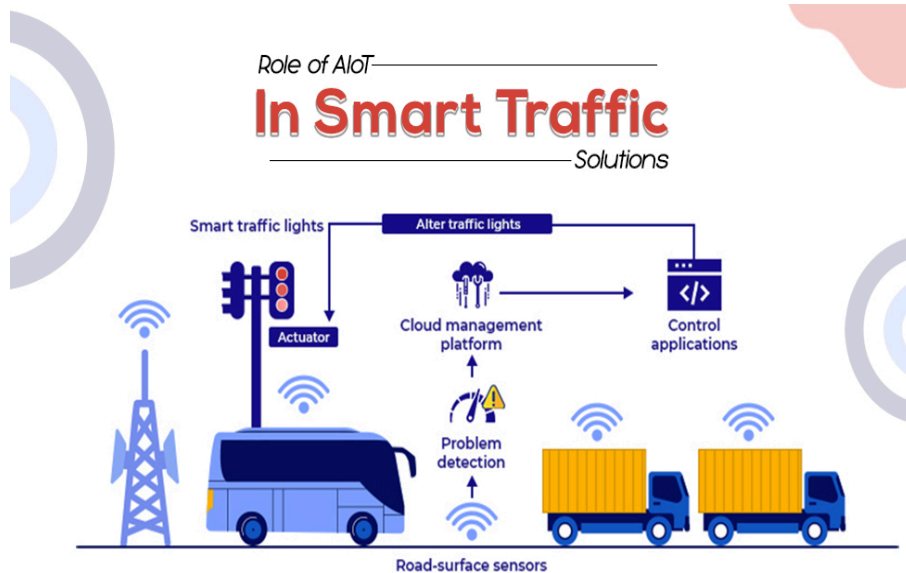
Fig.1.2(Code)

Fig.1.3 (Smart trafficking)

In brief, I conclude my points with theories proven earlier the outcome of this project is very profitable and all the requirements for this subject is very easy and valuable for users. Cost and values for this project is very cheap and effective, you can easily add and secure your data.Outlines and dopping are for viewing the conditions that is related to structural, subjective traffic management system. Project work is good!