

# VEHICLE DETECTION & TRACKING

## WORKFLOW OF VEHICLE DETECTION SYSTEM

- Loading HaarCascade Algorithm
- Initializing Camera
- Reading Frame from Camera
- Converting Color Image into Gray Scale Image
- Obtaining Car Coordinates by passing Algorithms
- Drawing Rectangle on the Car Coordinates
- Display the Output Frame

In [1]:

```
import cv2
import imutils

cascade_src = 'cars.xml'
```

In [2]:

```
car_cascade = cv2.CascadeClassifier(cascade_src)
cam = cv2.VideoCapture(0)
```

In [3]:

```
while True:
    detected = 0
    _, img = cam.read()    #Reading Frames from camera
    img = imutils.resize(img, width = 300)    #Resize to 300
    gray = cv2.cvtColor(img, cv2.COLOR_BGR2GRAY)    #Color to Gray Scale
    cars = car_cascade.detectMultiScale(gray, 1.1, 1)    #To detect Coordinates of vehicle
    s in frame

    for(x, y, w, h) in cars:
        cv2.rectangle(img, (x, y), (x+w, y+h), (0, 0, 255), 2)
    cv2.imshow("Frame", img)
    b = str(len(cars))
    a = int(b)
    detected = a
    n = detected
    print("-----")
    print("Vehicle: %d"%(n))

    if n>=2:
        print("North More Traffic")
    else:
        print("No Traffic")
    if cv2.waitKey(33) == 27:
        break
cam.release()
cv2.destroyAllWindows()
```

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**KeyboardInterrupt**

Traceback (most recent call last)

<ipython-input-3-4fdb1f9686d5> in <module>

20 else:

21 print("No Traffic")

---> 22 if cv2.waitKey(33) == 27:

23 break

24 cam.release()

**KeyboardInterrupt:**