# USING IOT TECHNOLOGY FOR SMART TRAFFIC MANAGEMENT

## Group Members

## Rishab Patnaik(6)

## Sumeet Choudhary(5)

# Abstract

Traffic signals are one of the sectors where technology and advancements have not been utilized to the fullest potential. Most populated countries like India, China etc they have huge traffic congestions on road.

India’s road condition are not expanding/improving in proportion with the increase in vehicle numbers. Times of India(newspaper) estimates that the annual cost of traffic congestion in India is **RS 60,000 crore** which includes fuel wastage and lost productivity. Much of this congestion could be addressed with Internet of Things technology.

Usually in any traffic signal , it gives green light only after a particular time period (usually 60 seconds) . But we believe that traffic signals should change only after it has analysed whatever lane is the busiest one. This can be analysed by thermal sensors that will analyse the heat of each lane. The busiest lane will be then given the green light.

Morever most of the traffic occurs due to people trying to find parking spaces. So we believe we can fix this problem by attaching sensors to the parking sensors to indicate wheather a particular space is free or not. These sensors wouldn’t need much power as they would run on small lithium batteries that would run for considerable amount of time before replacing it.

These sensors in each case will upload the data to a controlling computer or to a cloud application on the internet and drivers could access the data in real time. Rather then seeking for empty parking spaces, drivers would know actually where to go.

## Hardware requirements

1.Arduino Uno

2. Jump wires

3. Thermal sensors

4. Ultrasonic sensors

5. Led

## Software requirements

1. Arduino Platform
2. Proteus 8 Proffesional