



SMART TRAFFIC LIGHT SYSTEM

*Tired of the light turning red way too quickly?
Are you stuck waiting on the same intersection for
too long?*

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60%

of the population are urban residents.

More moving vehicles need to be accommodated over a fixed size of transportation infrastructure.



SOURCE: WWW.CNBC.COM





AIM

Control Duration of green light for a specific traffic light at an intersection.



RULE

The traffic signals should not flash the same stretch of green all the time, but should depend on the number of cars present.

BENIFIT 1

ACCIDENTS

Minimize number of accidents (fewer fatalities)
Reduce number of patients in hospitals
Reduce demand on emergency response teams
Release funds of medical supplies

BENIFIT 2

POLLUTION

Minimize carbon footprint
Increase fuel efficiency
Reduce excessive breaking (less wear & tear)

BENIFIT 3

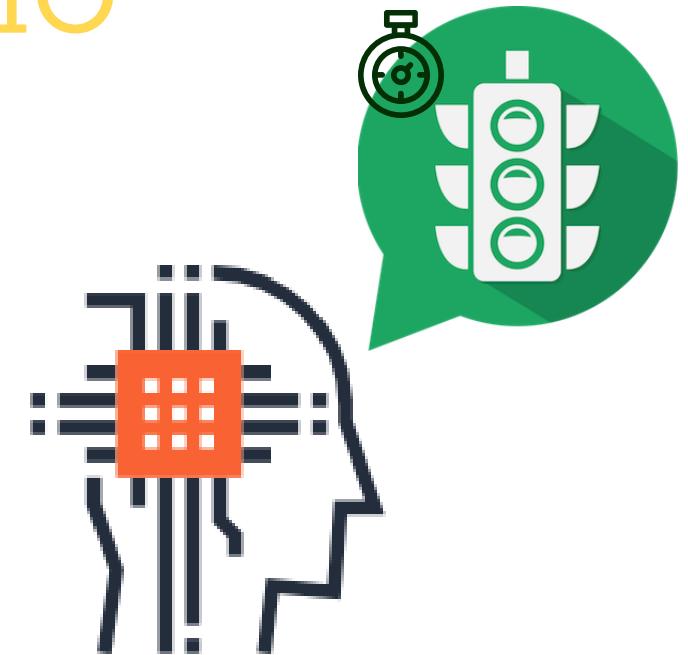
COMMUTE HASTLE AND COST

Minimize hassle and cost of commuting
Lower insurance rates (less accidents)
Reduce fuel cost and amount of lost time

USER SCENARIO



Sensor detects increasing flow of traffic



Intelligent System increases number of seconds green light is on

TECHNOLOGY

Colored LEDs

Traffic Light



seconds green/red
A small diagram showing a grey cable with a braided metal mesh covering around its end, with a short horizontal arrow pointing towards the text "seconds green/red".

Arduino Uno

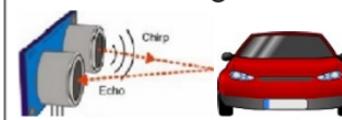
Traffic Light Controller



collected data
A small icon of a red car with a double-headed vertical arrow above it, indicating data exchange.

HC-SR04

Car Counting Sensor



number of cars
A small diagram showing a grey cable with a braided metal mesh covering around its end, with a short horizontal arrow pointing towards the text "number of cars".

mode of operation



Figure 1.5.1.1. Model Block Diagram



WHY TO USE THIS SYSTEM?



LOW BUDGET

The technology used has a very low price. The system's total price is estimated to be \$25



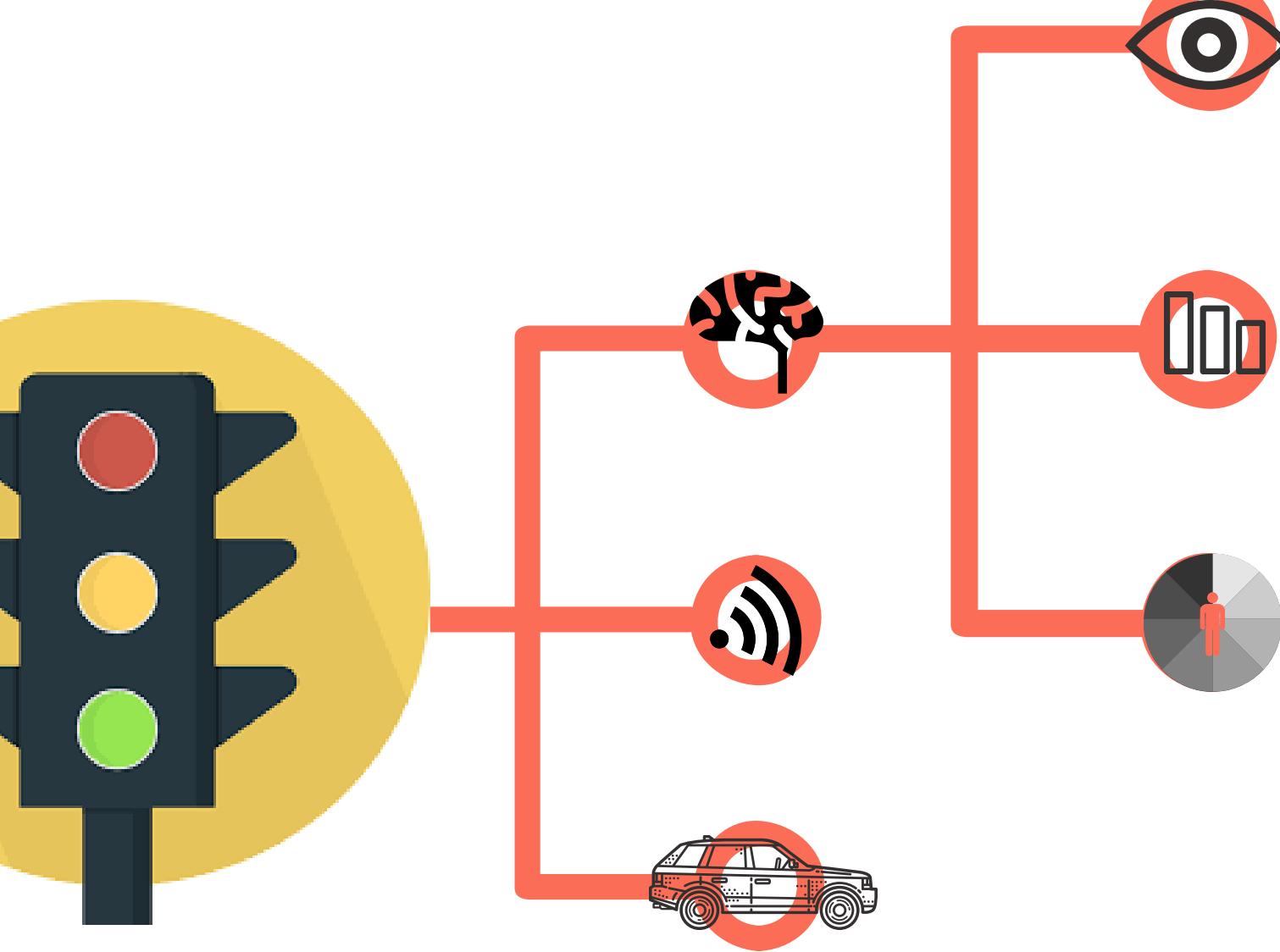
SIMPLE IMPLEMENTATION

The car detection sensor used is non-invasive. No road work is needed to mount the system



EASY MAINTENANCE

Any problem encountered can be solved remotely because the system is connected to the internet



THANK YOU!