



6 Billion

gallons of fuel savings

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large savings on fuel costs

1.4 Million

tons of CO2 could be prevented from entering the atmosphere

The Problem

High contribution of automobiles to CO2 emissions

- An hour of automobile idling burns approximately one-fifth of a gallon of gas and releases nearly 4 pounds of CO2 into the air.
- Transportation is still responsible for 24% of direct CO2 emissions from fuel combustion.
- The idling of cars not only damages the environment but also damages an individual's vehicle.
- Idling leaves fuel residues that can condense on cylinder walls, where they contaminate oil and damage engine components such as spark plugs.

The Solution

Smarter traffic and idling management system

Swift is a traffic management and monitoring system that makes use of Artificial Intelligence, Deep neural network and Algorithms to improve and suggest changes in traffic management and trends which work on the fundamental principle of Ai image tracking by using OpenCV to track cars in real-time.

It is a device that can be attached to present traffic signals enabling the smooth transition into a smarter monitoring system using existing infrastructure.

How does it Work?

The system captures an image before 2 seconds of the traffic signal turning green. A predefined program calculates the number of vehicles in the frame captured on the road. The amount of green light time depends on the number of vehicles present on the road. Additionally Swift also consists of a mini LED display which shows the amount of time remaining for the signal to turn green thus encouraging the drivers to switch their vehicles to stand-by mode.

Key Points and Additional Applications

Multi-object classification

Swift classifies detected objects into 7 major categories thus making it easier for the program to use the data.



Infrastructure Alerts

When certain areas experience large amounts of traffic repeatedly the device can alert the concerned authorities to improve road infrastructure.



Automobile software integration

The device could send data related to traffic or high density of pedestrians to cars which could in turn alert drivers and prevent accidents especially during low visibility.



Our Team



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