

ABSTRACT

Transportation is responsible for 29% carbon emissions. Of there, road transportation accounts for more than 15%. Even though electric vehicles is seen like a good alternative, it will take atleast 5-15 years for the conversion of all vehicles to electric vehicles. Moreover, as the fuel prices are rising, the transportation activities are becoming more expensive. So, the problem we are presenting is 'How might we reduce the emissions as well as fuel consumption to reduce cost in the transportation sector'.

The solution we are proposing is called "Ecosense" which consists of three parts. First using our NCF Box, we monitor CO₂ and NO emissions coming from the exhaust of the vehicles. The readings from the sensors are transmitted real time through IOT. Secondly, these details are uploaded into Cloud and ML algorithms and are used to monitor and identify critical values. Finally, the processed data can be viewed by vehicle owners through a web app. Also, in case of extreme critical values, the system issues an alert or maintenance trigger so that maintenance can be carried out and reduce the degradation of the vehicle. This can enable lesser emissions and fuel consumption, as compared with rough vehicle condition.