1. Edition/Category (Hardware or Software):
HARDWARE
2. Sector/Theme *(Smart Communication, Healthcare & Biomedical devices, Smart Vehicles, Robotics and Drones, Renewable Energy):*
Smart Communication
3. Title of Problem Statement:
Smart Traffic Monitoring and controlling
4. Background (short description):
"Traffic control for the people, by the people". The smart phone-based Application captures the traffic flout and directly share it with traffic control team. App will have information about Traffic rules with best user interactive appearance. App will reduce Burden on traffic control team.
5. Problem Statement:
The traffic is huge problem in metro cities in India and to monitor it throughout a day it's the difficult task. The Traffic control and monitoring team can control this up to certain extent. However, the main responsibilities lie on individual. The simple smart phone-based application has capability to record the rule breaking and flout traffic situation which will be shared with traffic control team (Traffic Police). In current situation, the traffic control team uses a camera to capture people with flouting traffic rules and along with this they have to control the city traffic too. It is difficult for them to keep an eye on both the activities at a time. To reduce their workload, an individual can install this app and will be able to share the evidence with traffic control team.   The awareness of this app will lead an individual to follow traffic rule strictly in order to avoid mistakes done by others. The app will have traffic rule guidelines which will help an individual to learn more about traffic rules. The app will provide credit to user on capturing valid traffic flout. The App can cover large scale to small scale Traffic rule evades (e. g. No Parking, Pedestrian crossing evades). Each individual can contribute toward traffic control, awareness, and behavior of individual toward traffic rules.
6. Outcome Expected: 1. Application runs on Android and IOS app which is directly integrated with traffic control team.   2. Distributed way of traffic maintenance.
7. MATLAB, Simulink and toolboxes: <mark>Complimentary/Free software would be available for all the student team members who will submit their abstract.</mark>
ThingSpeak, Image processing toolbox, Computer vision toolbox, Mapping and Navigation, Image Acquisition toolbox, MATLAB Coder, Simulink