

# Hackfest 2020

Idea Submission





# TEAM - TRAFFIC EYES

## TEAM MEMBER

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## THEME

The Commute in the Modern Era : A solution for a high number of traffic violations.



# PROBLEM STATEMENT

Living in India, one of the major problems in the transport sector is the high number of traffic violations being committed by the citizens on an everyday basis. These cause chaos, accidents, casualties too at times and act as support for similar practices to be continued in the future. The conventional mindset of people and some of the corrupt traffic policemen are to blame for this. Despite having traffic laws in place, they still fail to tackle the situation because of weak enforcement. Even today, citizens think there is always a way around paying hefty fines after committing traffic violations because of which they commit violations naturally without even thinking much and act like it is not a big deal. Hence to improve this situation, there is need of a traffic violations reporting system other than the existing ones which can reduce the number of violations to minimal and change the attitude of people towards driving and following traffic rules.



# SOLUTION

I intend to solve the problem by having a traffic violations reporting system that can be used by the citizens to report traffic violations around them. This can be done using a mobile application. Now it seems very vague to make the previous statement but if you understand in detail, you will be able to see why the proposed solution can tackle all the problems and can stand out to be the best solution to accomplish the job.

## ADDED BENEFITS

1. More revenue for the government.
2. Reduction in unemployment as it will create more jobs.
3. Eliminating cases of corruption by traffic policemen.
4. Improve the attitude of people towards following traffic rules.
5. Reducing avoidable accidents and casualties.
6. Long term solution.
7. Extremely useful for India and also extendible to other countries.
8. Authentic violations reporting.



# SOLUTION

## EASY OR DIFFICULT IMPLEMENTATION?

The idea is the only thing that is new here otherwise technologies to build the technical requirements exist already.

## EXTENT OF SCALABILITY AND USABILITY

The extent of usability is pretty wide. It could be used by all citizens in spite of what age they are if they know how to use the application properly to report violations. The idea is initially thought for India as the problem is chronic here and we get inspiration from here but later it can be scaled up and extended to other countries too.



# SOLUTION

Thus, the idea is to turn to people/citizens for support. If somehow the citizens can be encouraged to report traffic violations then it will solve all the above 3 problems as -

1. There won't be cases of corruption. Either a citizen reports a crime or doesn't. But in no case there will be any corruption and bribing.
2. Infrastructure will be a citizen's own mobile device and hence, no government money on infrastructure and maintenance will be required.
3. The people are spread over the entire Indian land and they travel too. Hence with this, much more area can be covered and violations from small to big would all be possible to report which would mean more revenue.
4. Also, people won't be just aware of the policemen while they break laws but also conscious of other people not recording the violation which will further help to improve attitude and reduce violations drastically.



# METHODOLOGY

To have the right approach, the major observed problems from the existing solutions needs to be taken into account. They include -

1. Corrupt traffic policemen
2. Damage/theft of publically installed cameras meant for traffic monitoring
3. Less coverage area leading to unreported traffic violations.

To solve all these, the approach can be to have a mobile application to report traffic violations. As soon as the user downloads the app, to make the reports credible, we can add user verification with any government unique ID.



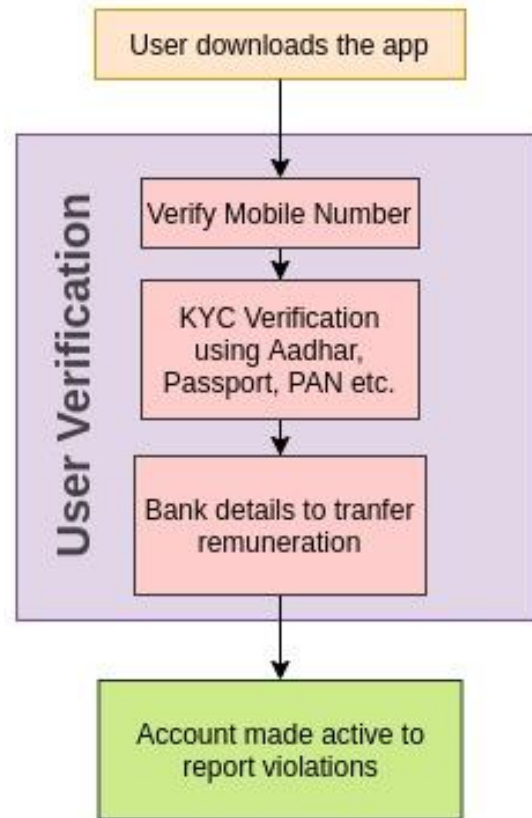
# METHODOLOGY

For example -

The screen features a traffic light icon with red, yellow, and green lights. Below it, the text "We are Watching" is displayed. The main heading is "Traffic Eyes" in bold, followed by "LOGIN" in large letters. Below this, it says "with your mobie number" (note the typo). At the bottom, there is a text input field containing the number "+91-997100|".

The screen features a traffic light icon with red, yellow, and green lights. Below it, the text "We are Watching" is displayed. The main heading is "Traffic Eyes" in bold, followed by "VERIFY YOURSELF" in large letters. At the bottom, there is a button labeled "Get your KYC done".

The screen features a traffic light icon with red, yellow, and green lights. Below it, the text "We are Watching" is displayed. The main heading is "Traffic Eyes" in bold, followed by "VERIFY YOURSELF" in large letters. At the bottom, there is a dropdown menu labeled "SELECT YOUR ID" and a text input field labeled "Enter your id number" containing the number "102486810|".







# METHODOLOGY

## WHY WILL CITIZENS TAKE OUT TIME AND REPORT VIOLATIONS ?

But why would citizens take out time to report traffic violations of other people? Well they will if they get remuneration for the same. For every reported violation, if it is validated and revenue is generated from the fine collected, then a standard percentage (for example 10%) can be shared with the reporter of that violation. So this would mean for a 1000 INR fine, 900 INR can go to the government or the body that issues challan/fine and the remaining 100 INR can be directly shared with the reporter of that violation to encourage him to keep doing the good work. So if the violation had not been reported, it would have meant no profit for the government and we all know 90% of something is much better than 100% of nothing.



# METHODOLOGY

## ENSURING AUTHENTICITY OF DATA/REPORTS

Now the next question that pops in mind is, how will we ensure the authenticity of the violation reported. It is possible that a citizen just keeps on reporting anything random with unclear photos and videos to support his report in order to earn money. For that, we can have our reporters validate themselves with their unique government issued ID before they can start report crimes. So, this will eliminate fake profiles and add credibility to the data as we will know exactly who is reporting and in case of a wrong report, we can get to the reporter without any problem.

To further ensure right reporting, while taking photos or recording videos to report violations, the app will use the location of the device along with timestamp and put it on the frame being captured itself to make the reporting more genuine and unalterable. More fields to input more data about the report can be given where the reporter can put details like car number, type of violation and more to further clearly convey the violation to the department.



# IMPACT ON SOCIETY

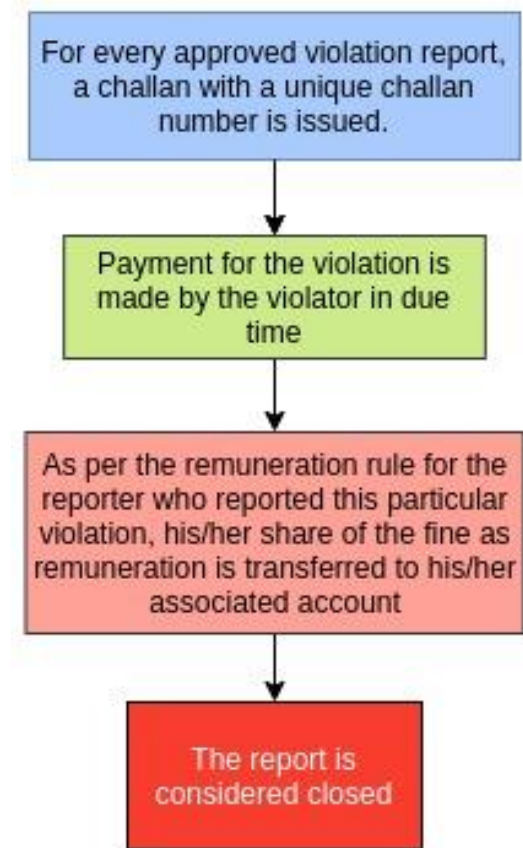
Some major impacts on society with this idea would include -

1. More revenue for the government.
2. Reduction in unemployment as it will create more jobs.
3. Eliminating cases of corruption by traffic policemen.
4. Improve the attitude of people towards following traffic rules.
5. Reducing avoidable accidents and casualties.
6. Long term solution.
7. Safer road experience and a systematic and implemented traffic rules system.



# BUSINESS RELEVANCE

The reported violations that directly lead to a challan / fine being issued to the violator will consequently lead to revenue for the governing body for the same. With this, major amounts of money can be generated from the actual violators of traffic rules.





# POSSIBLE MODIFICATIONS IN BUSINESS MODEL

A lot can be done over the business model -

1. 10% or less or more of the challan amount can be given as remuneration.
2. Remuneration can be made active after a certain number of correct reports to further add credibility to the reports from a certain user/citizen. For example, after 3 or 5 correct reports, remuneration can be started.
3. Remuneration can also be on the basis of the amount of fine imposed. For example, for a 1,000 INR fine, 10% can be given but for a fine greater than let's say 20,000 INR, only 5% can be given.
4. The remuneration can be directly credited into the bank account of the user after he fills his bank details after verification within the mobile application.
5. For more trusted reporters, i.e. ones that have reported let's say 100 or 500 correct violations, we can offer more remuneration to them.



## **FUTURE SCOPE**

Image Processing and more can be used on these images/videos that are reported as proof to determine the vehicle number on the Vehicle License Plate to be able to find the right owner of the vehicle that violated a traffic rule and issue a challan/fine if the proof is good enough to issue one. For checking the proof submitted along with a report, a team of traffic police officers can be assigned at the backend of the images/videos (proofs) to make the final call of whether a fine should be imposed or not. Thus, more jobs will be created and efforts of traffic police officers will be put to faster and better use without any scope of corruption.



## THE END RESULT

Well the crux is again, that revenue will be generated from the actual violators of the law and the generated money can be used to improve the infrastructure of the country like roads, flyovers, schools, hospitals etc. It can be used to improve education services, provide better healthcare and numerous other things where we still lag behind. The citizens will be more conscious and careful before breaking laws which will definitely decrease the number of violations significantly and change their attitude towards traffic rules.