

**The Commute in the Modern Era | Solution : A solution for a high number of traffic violations.  
A 'Traffic Violations Reporting System' with reporting outsourced to citizens  
(by Raghav Bansal)**

**BRIEF SUMMARY OF THE SOLUTION**

The idea is to have a traffic violations reporting system that can be used by the citizens to report traffic violations around them. Now it seems very vague to make the previous statement but if you read further and 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. Moreover, added benefits will be -

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 (Software can also be sold for the same).
8. Remuneration for citizens who report violations.
9. Authentic violations reporting.
10. Saving money on having traffic equipment in place for traffic monitoring.

**PROBLEM STATEMENT**

The high number of traffic violations being committed by the people on an everyday basis which cause chaos, accidents, casualties too at times and act as support for similar practices to be continued in the future.

**PROBLEM FACTOR**

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. 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.

## APPROACH

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

I strongly respect the police services but due to some corrupt officers, the blame has to be put on the traffic police too. Despite knowing that a violation was committed, many officers tend to wave everything off in exchange of cash payments as bribes. It is something everyone has experienced and is done because every violator would prefer paying significantly less than the actual fine of thousands. Hence, that money never reaches the government and spoils the attitude of violators further.

2. Damage/theft of publically installed cameras meant for traffic monitoring

Consistent efforts by the government in installing cameras for traffic monitoring has bore less fruit since these cameras get stolen or damaged by the miscreants. This is a straight waste of money.

3. Less coverage area leading to unreported traffic violations

Even the cameras and traffic police cannot cover close to 100% land area and see for traffic violations but that does not mean that violations are not committed there for example, often we see children below 18 driving motorized scooters and that too without a helmet or people rushing their cars at high speeds on narrow roads within small colonies. Also, the problem of wrong parking is a big issue and all these remain unreported.

Now with all the above being said, the approach can be to have a mobile application to report traffic violations. As soon as a user downloads the app and opens it for the first time, the app can prompt the user to make his account and verify himself to be able to report violations.

An example of the UI is shown below -

The image displays three sequential screenshots of the 'Traffic Eyes' mobile application interface, each featuring a traffic light icon and the text 'We are Watching'.

**STEP 1: LOGIN**  
The screen shows the 'Traffic Eyes LOGIN' screen. Below the title, it says 'with your mobie number' (note the typo). A text input field contains the number '+91-997100|'.

**STEP 2: VERIFY YOURSELF**  
The screen shows the 'Traffic Eyes VERIFY YOURSELF' screen. Below the title, it says 'Get your KYC done'.

**STEP 3: VERIFY YOURSELF**  
The screen shows the 'Traffic Eyes VERIFY YOURSELF' screen. Below the title, it says 'SELECT YOUR ID' with a dropdown arrow. Below that, it says 'Enter your id number' and a text input field contains the number '102486810|'.

As shown above, any government ID like Aadhar, Passport, PAN etc. can be used for the same. With this, all the data that comes now will have credibility and people will be held accountable for wrong reporting and will be remunerated for the right reporting (ones which lead to issuing fines/challans) of violations.

Now, the approach to solve this situation must address the problems we listed. To solve the problem of corrupt traffic officers, we have to think of reporting systems without police involvement. Now that gives us two major ideas - one is to have machines i.e. cameras to monitor everything but as we have seen above, they are prone to being stolen and damaged by miscreants and they also require high maintenance. Thus, the other 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.

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.

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.

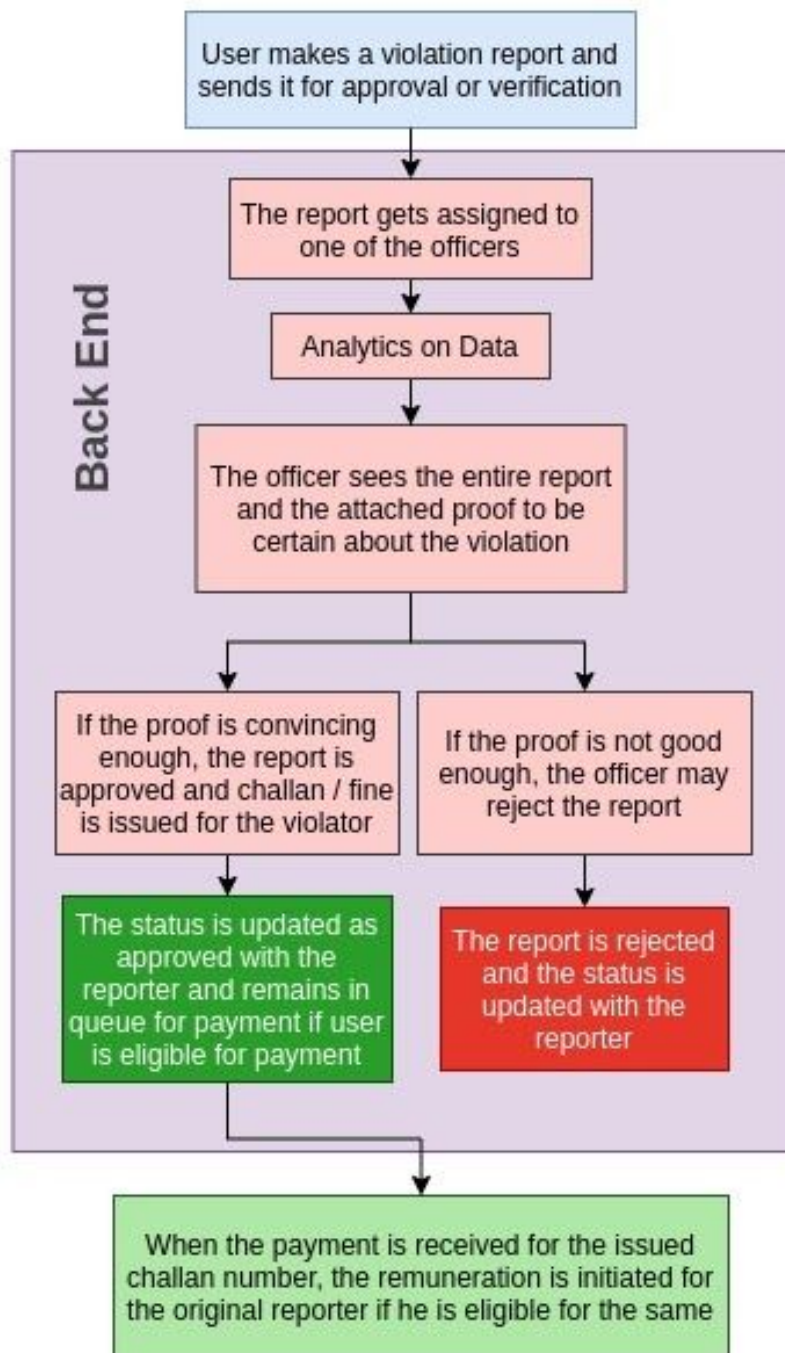
Image Processing and more can be used on these images/videos that are reported as proof to determine the vehicle number on the Vehicle License Plate to be able to find the right owner of the vehicle that violated a traffic rule and issue a challan/fine if the proof is good enough to issue one. For checking 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.

## **BUSINESS MODEL**

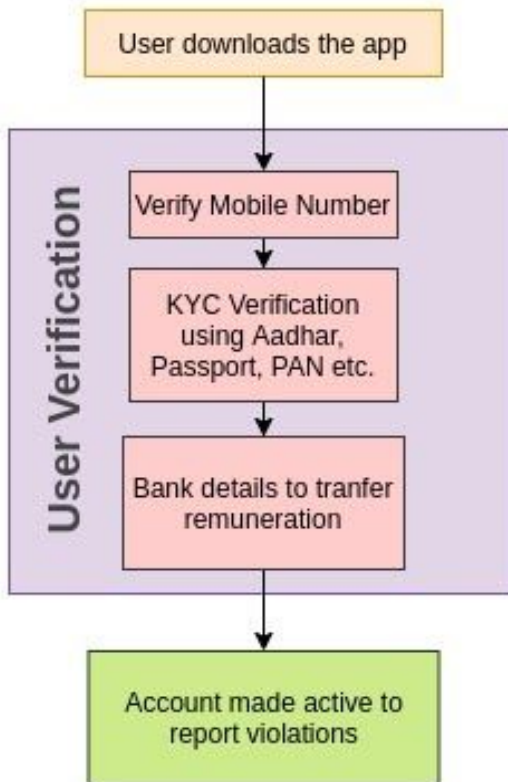
As stated above, the reported violations that directly lead to a challan/fine being issued to the violator will consequently lead to revenue for the governing body for the same. A lot can be done over the remuneration for example,

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.

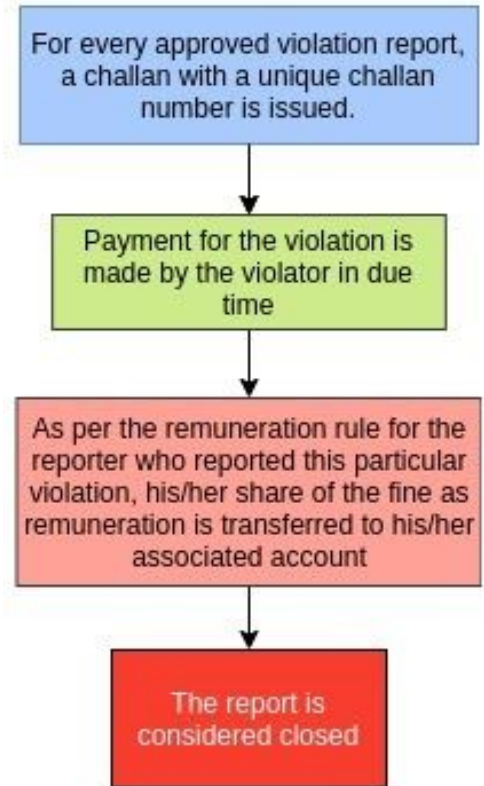
## RELEVANT DIAGRAMS



Report Approval Logic and Remuneration



Verification Workflow



Basic Business Model

### 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.