Teddy Hacks

Navigation Redesigned for Safety.

TedSafe

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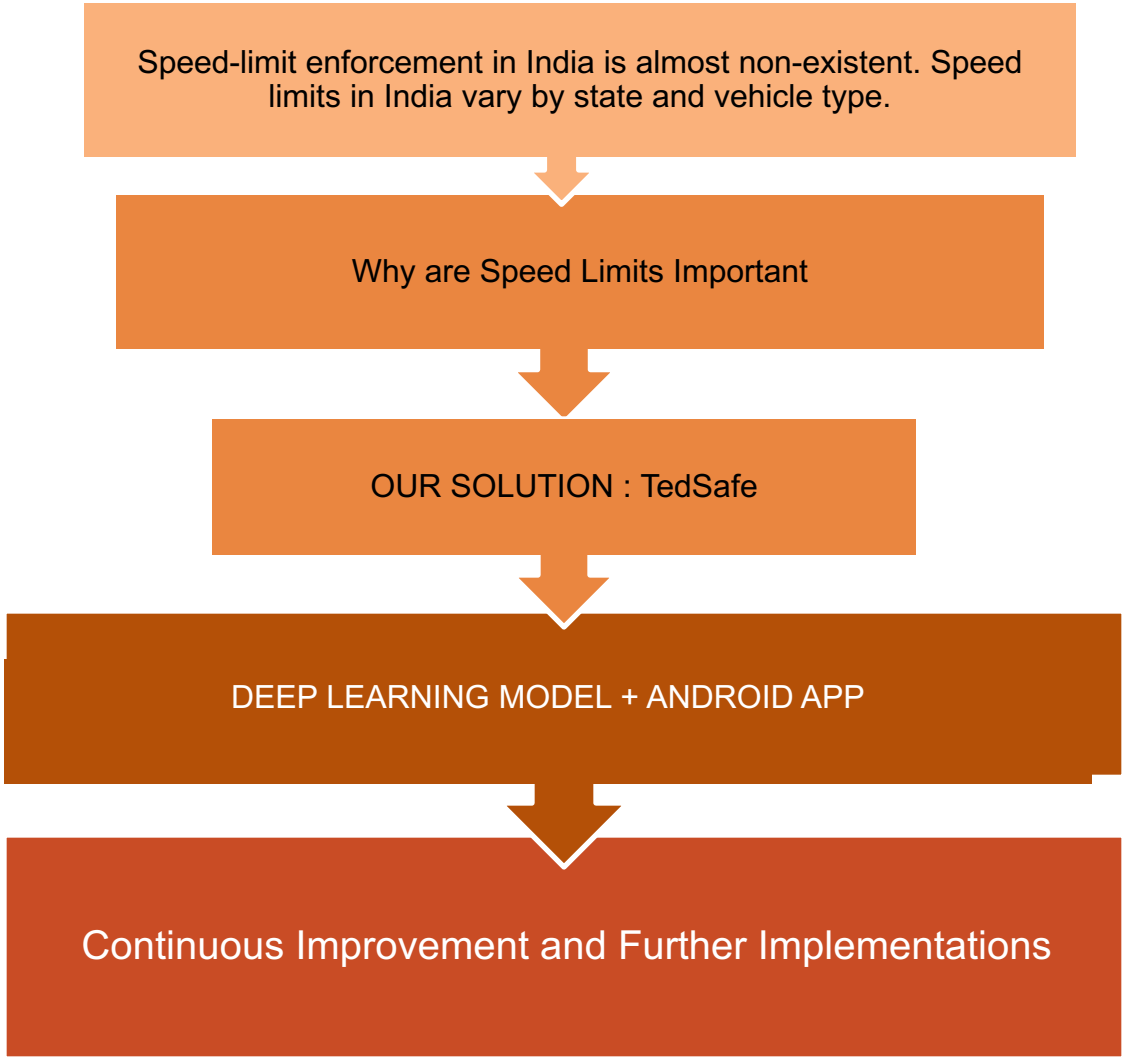
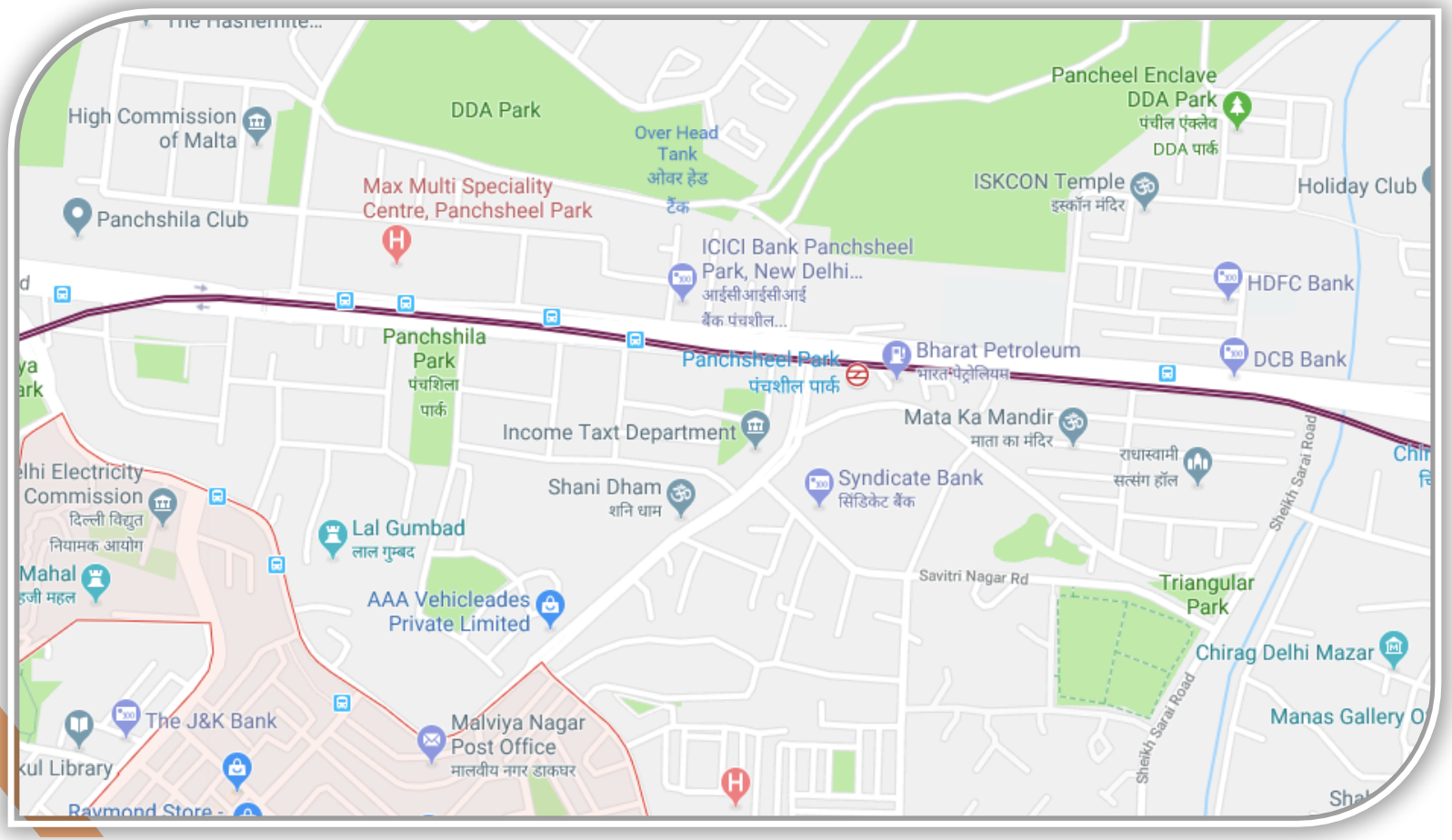
PROJECT OVERVIEW



Is there any database for Speed limits in India?

- NO
- **Speed limits in India** vary by state and vehicle type. Lower limits than the ones specified can be set by local governments. All speed limits are in km/h. In 2007, a law was proposed to set a nationwide 100 km/h speed limit for cars and 65 km/h for motorcycles, but this was not implemented.
- Frequent changes are happening due to development.
- Speed-limit enforcement in India is almost non-existent, although recently highway police have begun to use automated instruments which capture the speed and mail the fine to the car's owner. Failure to pay may result in doubling of the fine, cancellation of the driving license and even arrest.

How this speed limit alert can be helpful:



Why are Speed Limits Important

Obeying speed limits, respecting others make streets, highways safer

1. Speed limits are set with the goal of keeping everyone safe. There is an inherent risk when driving a car – not just for the driver, but for others on the road (including passengers, other drivers, bicyclists, and pedestrians).
2. **SAFETY**: There's no debating the potential deadly consequences of speeding and aggressive driving.Driving at safe speeds and respecting other motorists, pedestrians and bicyclists will reduce those horrible crashes on our streets and highways.
3. **FOLLOWING LAWS** : (pocket friendly tip) police have begun to use automated instruments which capture the speed and mail the fine to the car's owner. Failure to pay may result in doubling of the fine, cancellation of the driving license and even arrest. Knowing the speed limits and driving laws of the country you are visiting is always useful so you can stay away from speeding tickets or any other unnecessary troubles.
4. **BETTER TRAFFIC FLOW**: Speed limits help limit your speed, which in turn reduces the amount of time it takes for you to react to changes in the roadway or flow of traffic and makes it easier for you to stop your vehicle if needed.

TEDSafe:

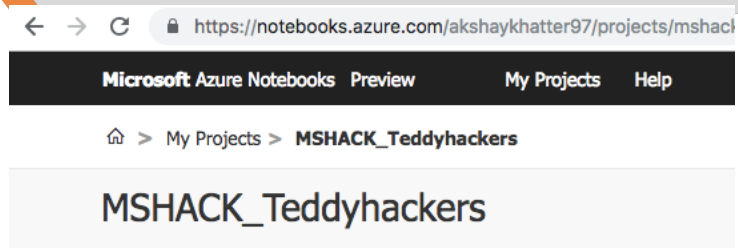
Knowing the speed limits is extremely important, but sometimes it gets difficult to keep track of the current speed limit. Luckily, TedSafe GPS Navigation includes Speedometer and Speed limits, so you will always see your current speed and the maximum allowed speed on the road you are driving on.

It alerts you when you cross speed limit automatically

You should always look out for road signs to know the exact speed limit on that specific road. But sometimes you miss a sign. This happens especially when you drive on unfamiliar roads or you look out for other cars. And sometimes you get distracted by your passengers.

Drive with TedSafe GPS Navigation and you will always know the current speed limit, even when you miss a sign.
You will get clear visual and voice alerts every time you exceed the speed limit. For increased safety and a smooth driving experience, TedSafe will also warn you about the upcoming speed limit change before it becomes effective, so you can adjust your driving accordingly.

You will drive safely and avoid paying unnecessary speeding tickets, too. TedSafe will alert you when you approach a zone prone to accidents due to speeding, so you will always have all the information you need to prevent getting into trouble for driving too fast.



Tech Implementaion:

Trained a Deep Learning Model to recognize a street sign in an image and then label its MAX SPEED limit.

The data obtained through the model is used to provide a warning to users when they over speed while navigating.

Users:

- B2C
- B2B

Data and Preprocessing

The Dataset came with training examples along with their bounding box.

Data and Preprocessing

Introducing noise and shifting the pixels to make the dataset large, taking the number from 456 to up to 22,000 pictures.

Object Detection and the final predictions

- Train the neural net work to classify the images having different street signs.
- Using YOLO implementation for detecting the bounding boxes of the road speed signs.
- Use the trained model to classify the bounding box into the given speed limit labels.

DON'T BREAK THE SPEED LIMIT

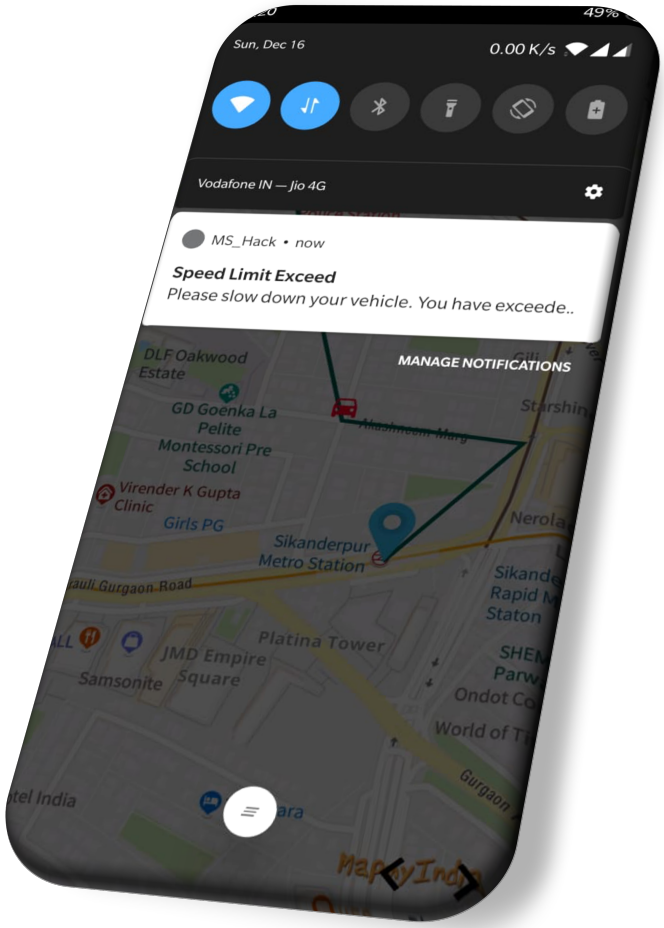
CONTINUOUS LEARNING THROUGH DASHCAMS

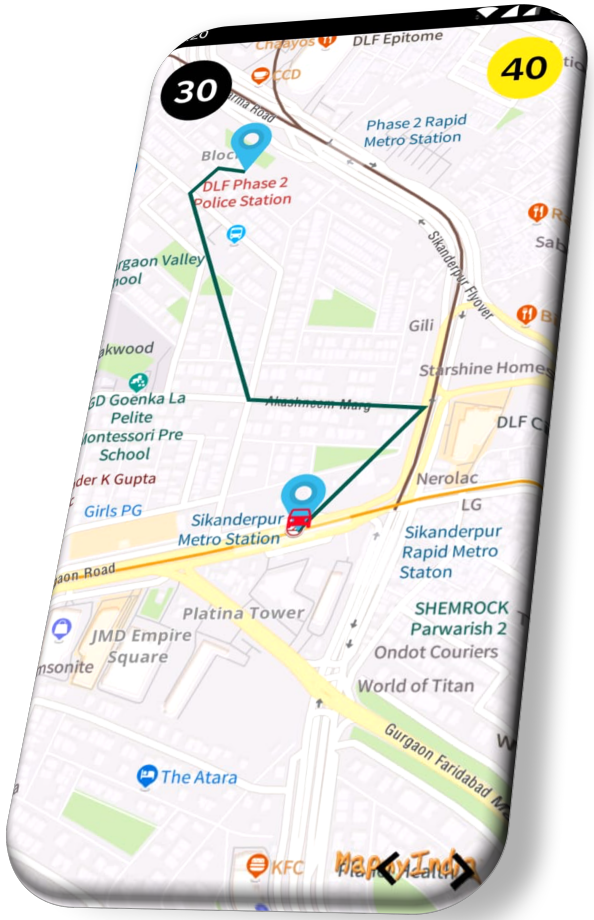
Using the data available through the Cameras / Dashcams, we can constanly keep improving our API.

This can provide an enhanced experience to our customers later in future.

This way our model keeps improving and we can have a reliable dataset, to give users up to date information at just the right time.

ACTUAL SCREENSHOTS:





Future integrations to enhance safety:

ADD-ONS:

COLLISION DETECTION

DROWSINESS DETECTOR