

Bengalathon – Solution Concept Note

Attempted Challenge:

Quick Accident Response

Challenge Description:

The solution should be able to distinguish 'impact' sounds when vehicles ram into each other on the road. The solution needs to be real time and the nearest PCR van should be alerted so that precious lives can be saved.

Proposed Solution Name:

PRONTO - As our solution is going to give a “pronto” response.

Brief Background of Proposed Solution:

Three applications are made, one for the driver's phone, another for the device in the vehicle, and the server application. The phone will catch the sound sending it to the server. A deep learning classifier is trained using the provided dataset which classifies if it is a crash sound. If the implemented device receives an accident crash sound, it checks with the classifier. If a “crash” response is found, the sound intensity with the location of the vehicle is sent to the server. The server then sends the location of the vehicle to the nearest PCR van for help.

Expected Outcomes:

According to Times of India about 146,133 people were killed in road accidents in India in the year 2016. Unfortunately, about 30% of deaths are caused due to delayed ambulance. In today's scenario the number of accidents per day is increasing exponentially and so is the number of deaths caused by it. With the help of technology and Artificial Intelligence we can stop these delays. Thus, with our solution we can save “120” people each day! This also goes with the Digital India vision.

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Risk and Mitigation Plan:

Risks:-

1. GPS position may not be accurate.
2. The details of the accident is unknown to the PCR van, might be a false alert.
3. Poor Internet connection.

Mitigations:-

1. Improving the performance of GPS.
2. Incase of a false alert, the user must cancel the request for quick response
3. If not internet, SOS facility must be enabled.

Revenue Outcome:

The total number of registered motor vehicles in India was 210023289 as on 31.03. 2015. Even if the market is 10% penetrable, and we generate 1 Rs. per user per annum through subscription or advertisements, we can generate Rs 2 crore of revenue per annum. This can increase if we can penetrate more, charge more subscription or show them more advertisement.