ABSTRACT:

Road accidents is the leading cause of fatality across the world. We propose to build a standalone device CRASOS with the capabilities of accident prevention, detection and recovery. Also, a rider rating system which can rate drivers on the basis of their speed, driving behaviour, braking intensity etc.

BUILD AND WORKING:

CraSOS is a standalone device which can be fitted inside a car or on a helmet of the two-wheeler rider. The device is equipped with accelerometer, gyroscopic sensors, an onboard camera etc.

**DRIVER RATING**: With an accelerometer and a gyroscopic sensor our product is able to monitor the velocity variations the vehicle undergoes, thus giving information about driving speed, lane changing behaviour and braking intensity which is used to rate the rider. The onboard camera can determine velocity of the cars ahead and will click pictures of the number plate when certain speed limit is exceeded. It will also consider the lane changing behaviour and rate the riders ahead considering all the factors.

ACCIDENT PREVENTION: If any fellow cars on the road will be showing odd behaviour (like changing lanes very frequently) then it will be identified and the driver will be warned.

ACCIDENT RECOVERY: When a collision or crash is detected through the shock sensors fitted in the device, the system beeps for 20 seconds after which a message is sent to helpline and contact numbers, which contains information about the location of the individual (using GPS in his/her mobile phone) and his/her medical details so that help can reach when its most needed.

Future Prospects: Predicting cars behaviour ahead of time to predict accidents before they can actually happen. (Inspired form self-driving cars)