Accident info analysis made easy by IIT-Hyderabad

Researchers at the Indian Institute of Technology, Hyderabad (IIT-H) have developed an accident data management system (ADMS) that will help police maintain and analyse information about accidents across the state. Following a report submitted by the Telangana DGP M Mahendar Reddy in the Hyderabad high court that revealed an alarming number of accidents in the state, Digvijay S Pawar, assistant professor at IIT-H in collaboration with Toyota Motor Corporation, Japan, developed a web based database ADMS that has the has ability to record, analyse and generate accident reports automatically. Around 7,000 accident records, mostly from Rachakonda commissionerate, from 2016 to 2018 were geo-coded by the research team at IIT-H to test the web-interface and the mobile application. "The system is believed to reduce the efforts put in by the traffic police to maintain and analyse the road accident record. The ADMS is developed using R programming which supports the data analysis, statistical computing with graphics support," said Digvijay Pawar. As part of the web-interface system, the researchers have developed a road accident recording form wherein police or those witnessing the accident can upload details such as accident type, number of fatalities, number of persons grievously injured, persons with minor injuries, property damaged, number of motorized vehicles and pedestrians involved among others. According to the team of researchers at IIT-H, due to poor accident database, stakeholders are unable to find the exact cause of the accident and therefore temporary measures are taken by the field engineers and police officers to tackle accidents. For this, the research team has developed a mobile application which will help in collecting accident data. "The application can be used by both the police officers involved in road accident reporting and the road users. Separate login interface is provided for police and road users. Road users can report the accident by uploading photograph or by recording the video," said Pawar.

The data recorded in the web-based interface and the mobile application will also help the police identify accident hot spots for two-wheelers as well as for pedestrians. According to the researchers, the web-interface and the mobile application can be used across the country.