ROAD TRAFFIC ACCIDENT ANALYSIS AND PREDICTION MODEL: A CASE STUDY OF VADODARA CITY

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ABSTRACT

India is a developing country and safety of road is still in a premature stage. Accident severity is increasing in order due to increasing in vehicle population. Accident leads to disablement, death, damage to health and property, social suffering and general degradation of environment. The road accident situation in India is alarming. Registers show that there is one death at every 2.75 minutes because of road accidents. The high accident rate is largely attributed to the inadequacy of the highways and other main roads to meet the traffic demands, road user behavior, vehicle defects, poor road geometrics and visibility. Road accidents enforce dense economic loss to the country. Road Safety is necessary to reduce accident involving both human and vehicles there by making the road more safe and user friendly to traffic. The number of accidents is rising up every year due to increasing vehicles population. To develop road accident prediction model each and every parameter related with the accident is considered and a micro level analysis of road accident is performed. For micro level analysis road accident data of last eight year (2009 to 2016) from police station is collected and a detailed analysis is performed on basis like Hour, year, location, type of collision, type of road, physical feature of road, age group, sex etc. On basis of this analysis effect of accident is identified. After analysis road traffic accident prediction models is developed based on different parameter.

Key words: accident, fatal, prediction model