

Dependent and Independent Variables for Exploratory Analysis of Road Traffic Accidents

Hamza Khyara, Professor Aouatif Amine and Bouchra Nassih

National School of Applied Sciences

University of Ibn Tofail

Kenitra, Morocco

Hamza.khyara@uit.ac.ma, aouatif.amine@uit.ac.ma, nassih.bouchra@univ-ibntofail.ac.ma

Abstract

Road safety is an interesting and complicating field. According to the World Health Organization (WHO), approximately 1.3 million people die each year as a result of road traffic crashes, and between 20 to 50 million are injured, 93% of the world's fatalities on the roads occur in low- and middle-income countries, even though these countries have approximately 60% of the world's vehicles. The young are particularly vulnerable on the world's roads and road traffic injuries are the leading cause of death for children and young adults aged 5-29 (WHO, 2021). First, the consequences of these numbers are reflected in families' pain, human tragedy, shattered destinies, and lives. Then in the economic situation of the country and its health services. Road traffic safety refers to the methods and measures used to prevent road users from being killed or seriously injured. Despite decades of research, this continues to be debated due to the factors associated with it such as road users' factors, environmental factors, road conditions, and economic factors, so forth. Exploratory Data Analysis (EDA) is an important stage when it comes to understanding data and extracting useful information. Several analyses have been conducted in order to better understand the factors most affecting Road Traffic Accidents (RTA) and reveal hidden information that can give insights to road stakeholders and law enforcement to take some preventive actions against accidents. Among the most important part in EDA is to determine the dependent and independent variables which make the data interpretation better and obvious. This paper presents some dependent and independent variables of road accident and the metrics for measuring the traffic accident severity.

Keywords

Road Safety, RTA, EDA, Dependent and Independent Variables.