1. Introduction

Car accidents are one of the leading causes of death worldwide, especially among children and young adults. Approximately 54 million people sustained injuries causes by road traffic crashes in 2013 with many of them leading to disabilities while 1.4 million of them were fatal [1]. The study also suggests that deaths from car accidents in 1990 were estimated to be 1.1 million showing an increase in fatalities. More than half of all deaths in road traffic accidents occurred among vulnerable road users such as cyclists, motorcyclists and pedestrians according to the World Health Organization. Car accidents is a major worldwide problem with social, economic and health consequences for the people. A significant number of scientific studies attempt to address this issue in order to find solutions spanning from policies to reduce the frequency and severity of the accidents to algorithms predicting the probability of occurrence and the risk of an incident. In this study we will focus on making real-time predictions on the severity of an accident given a set of environmental variables by implementing a machine learning model in order to warn drivers of potentially dangerous roads. The algorithm can be developed into an application for smartphones or be embedded into GPS devices as well as in electronic road signs which will be prompting the drivers to be more attentive or even avoid certain roads.