Introduction/Business Problem

Background

Every year car accidents cause hundreds of thousands of deaths worldwide. According to a study conducted by the World Health Organization (WHO), in 2016 there were 1.35 million road traffic fatalities worldwide, while another million suffered serious injuries and lived with long-term health problems. Road traffic accidents are the most common cause of death among young people between 15 and 29 years of age worldwide. Road traffic injuries are currently estimated to be the eighth leading cause of death worldwide in all age groups and are expected to increase further by 2030. A comprehensive analysis to predict road traffic accidents and their severity, using the tools and information available today, would significantly reduce the number of fatalities and contribute to the well-being of society. By analyzing a variety of factors, including weather conditions, location, type of road and lighting, an accurate prediction of accident severity can be made, and the planning and execution of local hospital operations can be supported. This type of information could be used by emergency services to send exactly the required equipment to the scene of an accident, so that more resources are available for accidents and can act more quickly. Therefore, road safety should be a prior interest for governments, local authorities and private companies investing in technologies that can help reduce accidents and improve overall driver safety. Here we can make the first investigations based on a local example and thus come closer to the goal of preventing and combating road traffic fatalities.

Problem

The data that could help determine the probability of a possible accident event includes information about previous accidents, such as road conditions, weather conditions, the exact time and location of the accident, the type of vehicles involved in the accident, information about the users involved in the accident, and of course the severity of the accident. This project aims at predicting the severity of the accident based on previous information that could be given by a witness who informs the emergency services.

Stakeholders

Governments should have a strong interest in accurate predictions of the severity of accidents in order to reduce the time of arrival and use resources more quickly, thus saving a significant amount of people each year. Other interested parties could be private companies that invest in technologies to improve road safety and new technologies that further support this project.