CAR CRASH ANALYSIS

In 2015, there were more than 34,000 motor vehicle deaths - about 93 people per day. The federal highway administration (FHWA) has the responsibility of providing support to state and local agencies to increase highway and roadway safety. In response, the FHWA created the General Estimates System (GES) that collects information on a stratified sample of all vehicle crashes. The GES database serves as an important source of information to Congress, FHWA and the National Highway Traffic Safety Administration (NHTSA) on vehicle related statistics. The FHWA seeks to use GES data to understand the relationship between independent variables such as road conditions, speed limits, driving habits, seat belt types, etc. and the probability of a serious injury in a vehicle-related accident. Understanding these relationships will, ideally, lead to policies that will save lives and create safer driving conditions.

The `Crash` dataset represents a subset of the GES database for vehicle-related crashes that occurred in 2013. The `SEVERITY` variable is an indicator if at least one person in the accident sustained a serious (including fatal) injury. That is, if `SEVERITY`$= 0$ then no one in the crash was seriously injured or died. Descriptions for the remaining variables found in `GESVariables.pdf` on the course webpage.

1. What factors significantly increase or decrease the probability of a severe crash?
2. Based on the given factors, what is the most dangerous situation for a severe crash?
3. How well do these given factors explain/classify severe crashes?