This thesis aims to analyze variables influencing different aspects of traffic accidents in the Czech Republic, such as frequency or fatality. Traffic accidents are a huge issue as there are 100 000 of them in the Czech Republic every year alone. The main contribution of this thesis is a new approach looking only at specific types of traffic accidents, such as those caused by speeding, introducing new variables that might be related to traffic accidents, and replicating the results of existing research in the area of the Czech Republic. On the one hand, we found a negative correlation between the portion of wedded people in the area and the number of traffic accidents. On the other hand a positive correlation between portion of wedded people and the number of people killed per accident. One possible explanation for this is that wedded people drive safer, but on average, there are more people in their car, resulting in more deaths in case of traffic accidents.