Identification and Analysis of Points and Segments of High Fatality Crashes

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Project Description:
This project deals with identification of crash high crash locations, analysis of crash trends for Interstate, US, and State highways in Arkansas; and crash prediction models for Arkansas highway segments. The first part identified the hotspots or high crash locations for the Arkansas for the three highway system. Empirical Bayes, crash rate, and equivalent property damage methods and composite rank methods were used in this regard. The second part focused on the identifying the crash trends based on driving under influence of alcohol, age, gender, crash severity level, characteristics of areas such as rural or urban, number of lanes separately for each highway system (interstate, US and State). Remedial measures were also provided based on the crash trends. The third part identified the factors which contribute to crashes using statistical modeling. Negative binomial, logistic regression, and multinomial logistic regression models were used to identify the crash contributing factors. The analysis was carried out separated for each highway system. Remedial measures were proposed based on the factors identified.

Publications: