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16. Abstract The National Center for Statistics and Analysis (NCSA) and the National Highway Traffic Safety Administration (NHTSA) suggest that head-on crashes are disproportionately represented in fatal crashes on two-lane highways, which constitute a substantial proportion of the highway network in the US. This study focuses on analyzing the correlation between head-on crash and potential causal factors, such as the geometric characteristics of the road segment, weather conditions, road surface conditions, and time of occurrence. Statistical and qualitative analysis were conducted using head-on crash records in Connecticut and Maine. The authors analyze the factors affecting the head-on crash frequency and severity on two-lane rural highways in both states. The analysis results may be used by practitioners to understand the trade-off between geometric design decisions and head-on crash severity. Furthermore, identifying correlated factors will help to better explain the crash phenomenon and in turn can institute safer roadway design standards.					
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