Infrastructure Safety

Improving Safety for a Safe, Sustainable, and Resilient Urban System

1. Kong, X., Li, Z., Zhang, Y., Das, S. Bridge Deck Deterioration: Reasons and Patterns. Transportation Research Record: Journal of the Transportation, 2022.
2. Das, S., Kong, X. Quantifying Bridge Element Vulnerability over Time. Transportation Research Record: Journal of the Transportation Research Board. Vol 2676(1) pp. 460-471, 2022.
3. Das, S., M. Le, K. Fitzpatrick, and D. Wu. Did Operating Speeds During COVID-19 Result in More Fatal and Injury Crashes on Urban Freeways? Transportation Research Record: Journal of the Transportation Research Board, 2022.
4. Obaid, I., Alnedawi, A, Aboud, G., Tamakloe, R., Zuabidi, H., Das, S. Factors Associated with Driver Injury Severity of Motor Vehicle Crashes on Sealed and Unsealed Pavements: Random Parameter Model With Heterogeneity In Means And Variances. International Journal of Transportation Science and Technology, 2022.
5. Tamakloe, R., Sam, E., Bencekri, M., Das, S., Park, D. Mining Groups of Factors Influencing Bus/Minibus Crash Severities on Poor Pavement Condition Roads Considering Different Lighting Status. Traffic Injury Prevention, 2022.
6. Hossain, M., Zhou, H., Rahman, M., Das, S., and Sun, X. Cellphone-Distracted Crashes of Novice Teen Drivers: Understanding Associations of Contributing Factors for Crash Severity Levels and Cellphone Usage Types. Traffic Injury Prevention. Vol 23(7), 2022.
7. Sohrabi, S., Y. Wang, S. Das, and S. Paal. Safe Route-Finding: A Review of Literature and Future Directions. Accident Analysis and Prevention Vol. 177, 2022.
8. Geedipally, S., M. Brewer, R. Wunderlich, M. P. Pratt, L. Wu, S. Das, and D. Florence. Examine Trade-Offs between Center Separation and Shoulder Width Allotment for a Given Roadway Width. TxDOT Project Report, 2022.
9. Rahman, MA, X. Sun, and S. Das. Understanding the Drowsy Driving Crash Patterns from Corresponding Regression Analysis. Journal of Safety Research, 2022.
10. Dixon, S., Park, E., Brewer, M., Wu, L., Geedipally, S., Srinivasan, R., Lan, B., Zegeer, C., S. Das, and Rista, E. NCHRP Report 995: Guidelines for Treatments to Mitigate Opposite Direction Crashes. National Academies, 2022.
11. Das, S., and Dutta, A. Light Delivery Vehicles Crashes: Identifying Insights using Joint Dimension Reduction and Clustering. Transportation Research Record: Journal of the Transportation Research Board, 2021.
12. Park, E., K. Fitzpatrick, S. Das, and R. Avelar. Exploration of the Relationship Among Roadway Characteristics, Operating Speed, and Crashes for City Streets Using Path Analysis. Accident Analysis & Prevention. Vol 150, 2021.
13. Zubaidi, H., Obaid, I., Mohammed, H., Das, S., Al-Bdairi, N. Hot spot analysis of the crash locations at the roundabouts through the application of GIS. Journal of Physics: Conference Series, vol. 1895(1), 2021.
14. Kong, X. Das, S., Zhou, H., Zhang, Y. Characterizing phone usage while driving: Safety impact from road and operational perspectives using factor analysis. Accident Analysis and Prevention. Vol 152(4), pp. 1-17, 2021.
15. Zubaidi, H., I. Obaid, I., A. Alnedawi, and S. Das. Motor Vehicle Driver Injury Severity Analysis Utilizing a Random Parameter Binary Probit Model Considering Different Types of Driving Licenses in 4-Legs Roundabouts in South Australia. Safety Science, 2021.
16. Das, S., X. Kong, S. Lavrenz, M. Jalayer, and L. Wu. Fatal Crashes at Highway Rail Grade Crossings: A US Based Study. International Journal of Transportation Science and Technology. pp. 17, 2021.
17. Zubaidi, H., I. Obaid, A. Alnedawi, S. Das, and MM Haque. Temporal Instability Assessment of Injury Severities of Motor Vehicle Drivers at Give-Way Controlled Unsignalized Intersections: A Random Parameters Approach with Heterogeneity in Means and Variances. Accident Analysis & Prevention. Vol 156, 2021.
18. Das, S., X. Kong, and I. Tsapakis. Hit and Run Crash Analysis using Association Rules Mining. Journal of Transportation Safety and Security, 2021.
19. Das, S., and A. Dutta. Extremely Serious Crashes on Urban Roadway Networks: Patterns and trends. IATSS Research, 2020.

20. Jalayer, M., M. Pour-Rouholamin, D. Patel, S. Das, and H. Parvardeh, H. A Penalized-likelihood Approach to Characterizing Bridge related Crashes in New Jersey. Traffic Injury Prevention, 2020.
21. Rahman, M., X. Sun, and S. Das. Reconfiguring Urban Undivided Four-Lane Highways to Five-Lane: An Unideal but Very Effective Solution for Crash Reduction. ASCE Journal of Transportation Engineering, Part A: Systems, 2020.
22. Das, S., and A. Bibeka. Understanding Crime and Demographic Influence on Non-motorized Trips: Macro-level Analysis. Journal of Human Behavior in the Social Environment, 2019.
23. Das, S., A. Dutta, R. Avelar, K. Dixon, X. Sun, and M. Jalayer. Supervised Association Rules Mining on Pedestrian Crashes in Urban Areas: Identifying Patterns for Appropriate Countermeasures. International Journal of Urban Sciences, 2019.
24. Das, S., M. Le, M. Pratt, and C. Morgan. Safety Effectiveness of Truck Lane Restrictions: A Case Study on Texas Urban Corridors. International Journal of Urban Sciences, 2019.
25. Das, S., R. Avelar, K. Dixon, and X. Sun. Investigation on the Wrong Way Driving Crash Patterns using Multiple Correspondence Analysis. Accident Analysis and Prevention. Vol. 111, pp. 43-55, 2018.
26. Das, S., A. Dutta, M. Jalayer, A. Bibeka, and L. Wu. Factors Influencing the Patterns of Wrong Way Driving Crashes on Freeway Exit Ramps and Median Crossovers: Exploration Using 'Eclat' Association Rules To Promote Safety. International Journal of Transportation Science and Technology, Vol. 7 Iss. 2, pp. 114-123, 2018.
27. Das, S., X. Sun, K. Dixon, and A. Rahman. Safety Effectiveness of Roadway Conversion with a Two-Way Left Turn Lane. Journal of Traffic and Transportation Engineering. Vol. 5, Iss. 5, pp. 309-317, 2018.
28. Jalayer, M, Zhou, H., and S. Das. Exploratory Analysis of Run-Off-Road Crash Patterns. Data Analytics for Smart Cities. CRC Press, Boca Raton, FL, 2018.
29. Le, M., S. Das, and M. Pratt. Safety Performance of Truck Lane Restrictions in Dallas-Fort Worth. TTI. Report, 2017.
30. Fitzpatrick, K., and S. Das. Is Age a Factor in Crashes at Channelized Right-Turn Lanes? An Exploration of Potential Relationships. Report No.: ATLAS-2016-14, 2016.
31. Khattak, M., A. Khattab, H. Rizvi, S. Das, and M. Bhuyan. Imaged-based Discrete Element Modeling of Hot Mix Asphalt Mixtures. Materials and Structures, Vol. 48(8), pp. 2417–2430, 2015.
32. Sun, X., and S. Das. Developing Crash Modification Factor for Louisiana. Report No. FHWA/LA.12/506, 2013.
33. Das, S., X. Sun, Y. He, F. Wang, and C. Leboeuf. Investigating the Safety Impact of Raised Pavement Markers on Freeways in Louisiana. International Journal of Engineering Research & Innovation, Vol. 5, Iss. 2, pp. 74-80, 2013.
34. Sun, X., Das, S., Sk, R., Wang, F. Predicting Driver's Crash Risk Based-On Previous Crash History. International Journal of Engineering Research and Innovation. Vol 5(2), pp. 74-80, 2013.
35. Sun, X., S. Das, N. Fruge, R. Bertinot, and D. Magri. Four-Lane to Five-Lane Urban Roadway Conversions for Safety. Journal of Transportation Safety & Security, Vol. 5, Iss. 2, pp. 106-117, 2013.
36. He, Y., X. Sun, L. Du, R. Jinmei, and S. Das. Level of Service for Parking Facilities. 15th International IEEE Conference on Intelligent Transportation Systems, Anchorage, AK, 2012.

Safe and Robust Inclusion of Non-motorists in Urban System

37. Fitzpatrick, K., A. Do, S. Das, R. Avelar, and M. Pratt. Improving Pedestrian Safety at Signalized Intersections: Impacts of Corner Radius. ITE Journal. Vol. 92(6), 2022.
38. Das, S., R. Tamakloe, H. Zubaidi, I. Obaid, and A. Alnedawi. Fatal Pedestrian Crashes at Intersections: Trend Mining using Association Rules. Accident Analysis & Prevention. Vol 160, 2021.
39. Fitzpatrick, K., R. Avelar, M. Pratt, S. Das, and D. Lord. Crash Modification Factor for Corner Radius, Right-Turn Speed, and Prediction of Pedestrian Crashes at Signalized Intersections. FHWA Report, 2021.
40. Das, S., K. Dey, and M. Rahman. Pattern Recognition from Cyclist Under Influence (CUI) Crash Events. Journal of Substance Use. pp. 1-6, 2021.
41. Das, S., Z. Wei, X. Kong, and X. Xiao. Mining Crowdsourced Data on Bicycle Safety Critical Events. Transportation Research Interdisciplinary Perspectives. Vol 10, 2021.
42. Das, S. Autonomous Vehicle Safety: Understanding Perceptions of Pedestrians and Bicyclists.

Transportation Research Part F: Traffic Psychology and Behavior. Vol 81, pp. 41-54, 2021.

43. Das, S., M. Le, and B. Dai. Application of Machine Learning Tools in Classifying Pedestrian Crash Types: A Case Study. Transportation Safety and Environment, 2020.

44. Das, S., S. Ashraf, L. Tran, and A. Dutta. Pedestrians Under Influence (PUI) Crashes: Patterns from Correspondence Regression Analysis. Journal of Safety Research, 2020.

45. Das, S. Identifying Key Patterns in Motorcycle Crashes: Findings from Taxicab Correspondence Analysis. Transportmetrica A: Transport Science, 2020.

46. Das, S., A. Bibeka, X. Sun, T. Zhou, and M. Jalayer. Aging Pedestrian Fatal Crash related Contributing Factors: Applying Empirical Bayes Geometric Mean Method. Transportation Research Record: Journal of the Transportation Research Board, 2019.

47. Das, S., Bibeka, A., Sun, X., Zhou, H., Jalayer, M. Elderly Pedestrian Fatal Crash-Related Contributing Factors: Applying Empirical Bayes Geometric Mean Method. Transportation Research Record: Journal of the Transportation Research Board. Vol 2673(8), pp. 242-253, 2019.

48. Das, S., K. Jha, K. Fitzpatrick, M. Brewer, and T. Shimu. Pattern Identification from Elderly Cyclist Fatal Crashes. Transportation Research Record: Journal of the Transportation Research Board, 2019.

49. Turner, S., Sener, I., Marin, M., White, L., S. Das, Hampshire, R., Colety, M., Fitzpatrick, K., and Wijesundera, R. Guide for Scalable Risk Assessment Methods for Pedestrians and Bicyclists. FHWA, 2018.

50. Turner, S., B. Dadashova, G. Griffin, and S. Das. Improving the Amount and Availability of Pedestrian and Bicyclist Count Data in Texas. TxDOT Report, 2018.

51. Mensar, M., Trueblood, A., Shipp, E., and S. Das. MCCS Data Analysis and Literature Review. FHWA Project Report, 2018.

52. Das, S., A. Dutta, K. Dixon, L. Minjares-Kyle, and G. Gillette. Using Deep Learning in Severity Analysis of At-Fault Motorcycle Rider Crashes. Transportation Research Record: Journal of the Transportation Research Board. Vol. 2672, Iss. 34, pp. 122-134, 2018.

53. Das, S., A. Dutta, Kong, X., and Sun, X. Hit and Run Crashes: Knowledge Extraction from Bicycle Involved Crashes using First and Frugal Tree. International Journal of Transportation Science and Technology, 2018.

54. Turner, S., Sener, I., Marin, M., S. Das, Shipp, E., Hampshire, R., Fitzpatrick, K., Molnar, L., Wijesundera, R., Colety, M., and Robinson, S. Synthesis of Methods for Estimating Pedestrian and Bicyclist Exposure to Risk at Area wide levels and on Specific Transportation Facilities. Publication No. FHWA-SA-17-041, 2017.

55. Das, S., and X. Sun. Factor Association with Multiple Correspondence Analysis in Vehicle-Pedestrian Crashes. Transportation Research Record: Journal of the Transportation Research Board, Vol. 2519, pp. 95-103, 2015.

Vehicle Inspection for Emission-free Urban System

56. Das, S., A. Dutta, and S. Geedipally. Applying Bayesian Data Mining to measure the Effect of Vehicular Defects on Crash Severity. Journal of Transportation Safety & Security., 2019.

57. Das, S. Automobile Safety Inspection. International Encyclopedia of Transportation, Elsevier. Amsterdam, Netherlands, 2019.

58. Das, S., S. Geedipally, K. Dixon, X. Sun, and C. Ma. Measuring the Effectiveness of Vehicle Inspection Regulations in Different States of the U.S. Transportation Research Record: Journal of the Transportation Research Board, 2019.

59. Das, S., A. Mudgal, A. Dutta, and S. Geedipally. Vehicle Consumer Complaint Reports Involving Severe Incidents: Mining Large Contingency Tables. Transportation Research Record: Journal of the Transportation Research Board. Vol. 2672, Iss. 32, pp. 77-82, 2018.

Social Media Mining on Transportation Trends and Urban Issues

60. Das, S., Dutta, A. Twelve-year Analysis of Transportation Research Board Annual Meeting's Official Hashtag. Transportation Research Record: Journal of the Transportation Research Board. Vol 2676(1), pp. 763-772, 2022.

61. Das, S., N. Trisha, I. Sener, and M. Walk. TCRP Synthesis 156: Uses of Social Media in Public Transportation. National Academies, 2022.

62. Das, S. City Transit Rider Tweets: Understanding Sentiments and Politeness. Journal of Urban Technology, 2021.

63. Das, S., Dutta, A., Mudgal, A., and Datta, S. Non-fear-based Road Safety Campaign as a Community Service:

Contexts from Social Media. Communication in Computer and Information Science. Conference Proceeding Book of 20th International Conference on Innovations for Community Services (I4CS), 12-14 January 2020, Bhubaneswar, India. Volume 717. Springer, Hessen, Germany, 2020.

64. Das, S., and G. Griffin. Investigating the Role of Big Data in Transportation Safety. Transportation Research Record: Journal of the Transportation Research Board. Vol. 2674(6), pp. 244-252, 2020.

65. Das, S., A. Dutta, T. Lindheimer, M. Jalayer, and Z Elgart. YouTube as a Source of Information in Understanding Autonomous Vehicle Consumers: A Natural Language Processing (NLP) Study. Transportation Research Record: Journal of the Transportation Research Board, 2019.

66. Das, S. #TRBAM: Influence of Twitter Hashtags. TR News, Nov-December Issue, 2019.

67. Das, S., A. Dutta, G. Medina, L. Minjares-Kyle, and Z. Elgart. Extracting patterns from Twitter to promote biking, 2018.

68. Sun, X., S. Das, V. Ragbhan, and R. Benton. User Sentiment Analysis with Louisiana Social Media Data for Better and Effective Crash Countermeasures. Report No. 14-4TIRE, 2015.

69. Das, S., X. Sun, and A. Dutta. Investigating User Ridership Sentiments for Bike Sharing Programs. Journal of Transportation Technologies, Vol. 5, Iss.2, pp. 69-75, 2015.

Mobility and Exposure Analysis

70. Tsapakis, I., S. Das, S. Jessberger, W. Holik, and P. Anderson. Improving Stratification Procedures to Estimate Annual Average Daily Traffic (AADT) for Non-Federal Aid-System (NFAS) Roads. Transportation Research Record: Journal of the Transportation Research Board, 2022.

71. Das, S., Sarkar, S., and Park, E. Impact of Operating Speed Measures on Traffic Crashes: Annual and Daily Level Models for Rural Two-lane and Rural Multilane Roadways. Journal of Transportation Safety and Security, 2022.

72. Dixon, K., S. Das, and I. Potts. National Cooperative Highway Research Program (NCHRP) 20-07 (384): Core Competencies for Key Safety Analysis. National Academies, 2021.

73. C. Dobrovolny, K. Balke, R. Bligh, S. Hurlebaus, S. Shi, A. Pike, S. Das, H. Charara, and C. Mott. Evaluation of Traffic Safety Improvements at Low Water Crossings. TxDOT Project Report, 2021.

74. I. Tsapakis, W. Holik, S. Das, E. Kraus, and P. Anderson. Informational Guide on Data Collection and Annual Average Daily Traffic (AADT) Estimation for Non-Federal Aid-System (NFAS) Roads, 2021.

75. Fitzpatrick, K., S. Das, T. Gates, K. Dixon, and E. Park. Considering Roadway Context in Setting Posted Speed Limits. Transportation Research Record: Journal of the Transportation Research Board (accepted), 2021

76. Das, S., S. Geedipally, and K. Fitzpatrick. Inclusion of Speed and Weather Measures in Safety Performance Functions for Rural Roadways. IATSS Research, 2021.

77. Wang, R., S. Das, and A. Mudgal. Patterns of Origin Destination Distributions: Rules Mining using Massive GPS Trajectory Data. Proceeding in the First International Conference on Urban Data Science, January 20-21, Madras, India, 2020.

78. Kong, X., S. Das, K. Jha, and Y. Zhang. Understanding Speeding Behavior from Naturalistic Driving Data: Applying Classification Based Association Mining. Accident Analysis and Prevention, 2020.

79. Dadashova, B., G. Griffin, S. Das, S. Turner, and B. Sherman. Estimation of Average Annual Daily Bicycle Counts using Crowdsourced Strava Data. Transportation Research Record: Journal of the Transportation Research Board. (in press), 2020.

80. Fitzpatrick, K., S. Das, T. J. Gates, E. S. Park, M. P. Pratt, K.K. Dixon, J. Kay, M. Chakraborty. Development of the Posted Speed Limit Setting Procedure and Tool, Web-Only NCHRP 17-76 Report, 2020.

81. Das, S., R. Avelar, S. Geedipally, L. Wu, D. Lord, and M. Banihashemi. Rural Speed Safety Project for USDOT Safety Data Initiative (SDI), USDOT, 2020.

82. Das, S., and S. Geedipally. Rural Speed Safety Project for USDOT Safety Data Initiative: Findings and Outcomes. ITE Journal. September Issue, 2020.

83. Das, S., and L. White. RuralSpeedSafetyX: Interactive Decision Support Tool to Improve Safety, SoftwareX, 2020.

84. Das, S. Traffic Volume Prediction in Low-Volume Roadways: Cubist Approach. Transportation Planning and Technology (in press), 2020.

85. McCourt, R., K. Fitzpatrick, P. Koonce, and S. Das. Speed Limits: Leading to Change. ITE Journal, pp. 40-45,

2019.

86. Fitzpatrick, K., R. McCourt, and S. Das. Are Attitudes Changing with Respect to the Setting of Posted Speed Limits? Transportation Research Record: Journal of the Transportation Research Board, 2019.

87. Fitzpatrick, K., and S. Das. Influences on Bicyclists and Motor Vehicle Operating Speed within a Corridor. SafeD UTC Project Report, 2018.

88. Sun, X., and S. Das. Developing A Method for Estimating AADT on All Louisiana Roads. Report No. FHWA/LA.15/14-3SA, 2015.

Autonomous Vehicles for Smart City Design

89. Das, S., Kong, X., and Hossain, M. Exploration on Prior Driving Modes for Automated Vehicle Collisions. International Journal of Urban Sciences. Vol 177, 2022.

90. Das, S., Wei, Z., and Ravuri, V. Safety and Operations of Automated Delivery Vehicles: A Scoping Review, 2022.

91. Rahman, M., K. Dey, S. Das, and M. Sherfinski. Sharing the Road with Autonomous Vehicles: A Qualitative Analysis of the Perceptions of Pedestrians and Bicyclists. Transportation Research Part F: Traffic Psychology and Behaviour. Vol 78, pp. 433-445, 2021.

92. Kutela, B., B. Dadashova, and S. Das. Mining Patterns of Autonomous Vehicle Crashes Involving Vulnerable Road Users to Understand the Associated Factors. Accident Analysis & Prevention. Vol 165, 2021.

93. Das, S., Zubaidi, H. Autonomous Vehicles and Pedestrians: A Case Study of Human Computer Interaction. International Conference on Human-Computer Interaction, 2021.

94. Das, S. An Exploratory Analysis of Unmanned Aircraft Sightings using Text Mining. Transportation Research Record: Journal of the Transportation Research Board. Vol 2675(5), pp. 291-300, 2022.

95. Dutta, A., and S. Das. Tweets about Self Driving Cars: Deep Sentiment Analysis using Long Short-Term Memory network (LSTM). Springer, 2020.

96. Das, S., Dutta, A., Tsapakis, I. Automated vehicle collisions in California: Applying Bayesian latent class model. IATSS Research, 2020.

97. Das, S., A. Dutta, and K. Fitzpatrick. Technological Perception on Autonomous Vehicles: Perspectives of the Non-motorists. Technology Analysis & Strategic Management, 2020.

98. Jalayer, M., and S. Das. Application of Unmanned Aerial vehicle to Inspect and Inventory Interchange Assets to Mitigate Wrong-Way Entries. ITE Journal. Vol 8(2), pp. 146-160, 2019.

99. Jalayer, M., and S. Das. Application of Unmanned Aerial vehicle to Inspect and Inventory Interchange Assets to Mitigate Wrong-Way Entries. ITE Journal, 2019.

100. Dixon, K., and S. Das. Measuring and Benchmarking Automated Vehicle Safety. TTI Report, 2017.

Advanced Modeling for Safe and Dynamic Transportation Systems

Statistical Models and Practice-ready Tools

101. Khodadadi, A., D. Lord, I. Tsapakis, A. Shirazi, and S. Das. Derivation of the Empirical Bayesian Method for the Negative Binomial-Lindley Generalized Linear Model: Application in Various Safety Analyses. Accident Analysis & Prevention. Vol 170, 2022.

102. Das, S., K. Fitzpatrick, L. Wu, Z. Wei, I. Tsapakis, S. Paal, S. Geedipally, and E. Park. Develop a Real-Time Decision Support Tool for Rural Roadway Safety Improvements. TxDOT Project. Final Report, 2022.

103. Sun, M., Sun, X., Rahman, M., Akter, M, Das, S. Modeling Two-Way Stop-Controlled Intersection Crashes with Zero-Inflated Models on Louisiana Rural Two-Lane Highways. IATSS Research. Vol 45(3), pp. 303-309, 2021.

104. Das, S., I. Tsapakis, and A. Khodadadi. Safety Performance Functions for Low-Volume Rural Minor Collector Two-lane Roadways. IATSS Research. Vol 45(3), pp. 347-356, 2021.

105. McFalls, J., B. Storey, S, Das, and J. Haberman. Permanent Vegetation Control Treatments for Roadsides. Web-Only NCHRP 14-41 Report, 2020.

106. Dixon, K., S. Geedipally, E. Park, R. Srinivasan, B. Lan, M. Brewer, S. Das, L. Wu, C. Zegeer, and E. Rista. Guidance for Selection of Appropriate Countermeasures for Opposite Direction Crashes. NCHRP 17-66 Report, 2020.

107. Avelar, R., S. Geedipally, S. Das, L. Wu, and B. Kutela. Evaluation of Roadside Treatments to

Mitigate Roadway Departure Crashes, TxDOT, 2020.

108. Geedipally, S., Das, S., Pratt, M., and Lord D. Determining Skid Resistance Needs on Horizontal Curves for Different Levels of Precipitation. Transportation Research Record: Journal of the Transportation Research Board, 2020.

109. Tsapakis, I., S. Sharma, S. Geedipally, B. Dadashova, and S. Das. Evaluation of Highway Safety Improvement Projects and Countermeasures. TxDOT, 2019.

110. Trueblood, A., Pant, A., Jisung, K., Kum, H., Perez, M., Das, S., Shipp, E. A Semi-Automated Tool for Identifying Agricultural Roadway Crashes in Crash Narratives. Traffic Injury Prevention. Vol 20(4), pp. 413-418, 2019.

111. Das, S., I. Tsapakis, and S. Datta. Safety Performance Functions of Low-Volume Roadways. Transportation Research Record: Journal of the Transportation Research Board, 2019.

112. Pratt, M., S. Geedipally, S. Das, and D. Lord. Pavement Safety-based Guidelines for Horizontal Curve Safety. TxDOT Report, 2018.

113. Das, S., B. Brimley, and A. Pant. Safety Impacts of Reduced Visibility in Inclement Weather. Report No.: ATLAS-2017-19, 2017.

114. Das, S., B. Brimley, T. Lindheimer, and M. Zupancich. Association of Reduced Visibility with Crash Outcomes. IATSS Research. Vol. 42, Iss. 3, pp. 143-151, 2017.

115. Dixon, K., K. Fitzpatrick, R. Avelar, and S. Das. Analysis of the Shoulder Widening need on the State Highway System. Report No. 0-6840-1, 2016.

116. Das, S., X. Sun, F. Wang, and C. Leboeuf. Estimating likelihood of future crashes for crash-prone drivers. Journal of Traffic and Transportation Engineering, Vol. 2 Iss. 3, pp. 145-157, 2015.

117. Sun, X., and S. Das. A Comprehensive Study on Pavement Edge Line Implementation. Report No. FHWA/LA.13/508. (2014 AASHTO High Value Research Sweet Sixteen Award), 2014.

118. Sun, X., S. Das, Z. Zhang, F. Wang, and C. Leboeuf. Investigating Safety Impact of Edgelines on Narrow, Rural Two-Lane Highways by Empirical Bayes Method. Transportation Research Record: Journal of the Transportation Research Board, Vol. 2433, pp. 121-128, 2014.

119. Sun, X., S. Das, and Y. He. Analyzing Crash-Prone Drivers in Multiple Crashes for Better Safety Educational and Enforcement Strategies. Journal of Transportation Technologies, Vol. 4, Iss.1, pp. 93-100, 2014.

120. Sun, X., and S. Das. Safety Improvement from Edge Lines on Rural Two-Lane Highways. Report No. FHWA/LA.11/487, 2011.

Advanced Data Mining and Categorical Data Analysis

121. Das, S., X. Sun, S. Goel, M. Sun, A. Rahman, and A. Dutta. Flooding related Traffic Crashes: Findings from Association Rules. Journal of Transportation Safety and Security, 2022.

122. Das, S., Sun, X., Dadashova, B., Rahman, M. Identifying Patterns of Key Factors in Sun Glare-Related Traffic Crashes. Transportation Research Record: Journal of the Transportation Research Board. Vol 2676(2), pp. 165-175, 2022.

123. Tamakloe, R., Park, D., and S. Das. Factors Affecting Motorcycle Crash Casualty Severity At Signalized And Non-Signalized Intersections In Ghana: Insights From A Data Mining And Binary Logit Regression Approach. Accident Analysis & Prevention. Vol. 165, 2022.

124. Tamakloe, R., Sam, E., Bencekri, M., Das, S., Park, D. Mining Groups of Factors Influencing Bus/Minibus Crash Severities on Poor Pavement Condition Roads Considering Different Lighting Status. Traffic Injury Prevention, 2022.

125. Hossain, M., Zhou, H., Das, S., Sun, X., Hossain, A. Young Drivers and Cellphone Distraction: Pattern Recognition from Fatal Crashes. Journal of Transportation Safety & Security, pp. 1-26, 2022.

126. Das, S. Hossain, M., Rahman, A., Kong, X., Sun, X., Mamun, G. Understanding Patterns of Moped and Seated Motor Scooter (50 Cc or Less) Involved Fatal Crashes Using Cluster Correspondence Analysis. Transportmetrica A: Transport Science, 2022.

127. Das, S., Aman, J. and Rahman, A. Content Analysis on Homelessness Issues at Airports by News Media Mining. Transportation Research Record: Journal of the Transportation Research Board, 2022.

128. Das, S., and Sarkar, S. News Media Mining to Explore Speed-Crash-Traffic Association During COVID-

19. Transportation Research Record: Journal of the Transportation Research Board, 2022.

129. Kong, X., Das, S., Zhang, Y., Wu, L., and Wallis, J. In-Depth Understanding of Near-Crash Events Through Pattern Recognition. Transportation Research Record: Journal of the Transportation Research Board, 2022.

130. Rahman, S., S. Das, and Sun, X. Single-Vehicle Run-Off Road Crashes Because of Cellphone Distraction: Finding Patterns with Rule Mining. Transportation Research Record: Journal of the Transportation Research Board, 2022.

131. Das, S., Tamakloe, R., Kutela, B., and Hossain, A. Pattern Recognition from Injury Severity Types of Frontage Roadway Crashes. Journal of Transportation Safety and Security, 2022.

132. Rahman, M., S. Das, and Sun, X. Using Cluster Correspondence Analysis to Explore Rainy Weather Crashes in Louisiana. Transportation Research Record: Journal of the Transportation Research Board. Vol 2676(8), 2022.

133. Kong, X., S. Das, and Y. Zhang. Mining patterns of near-crash events with and without secondary tasks. Accident Analysis & Prevention. Vol 157, 2021.

134. Rahman, M., X. Sun, S. Das, and S. Khanal. Exploring the Influential Factors of Roadway Departure Crashes on Rural Two-Lane Highways with Logit Model and Association Rules Mining. International Journal of Transportation Science and Technology. Vol 10(2), pp. 167-183, 2021.

135. Das, S., A. Dutta, and M. Rahman. Pattern recognition from light delivery vehicle crash characteristics. Journal of Transportation Safety & Security. pp. 1-19, 2021.

136. Kong, X., S. Das, H. Zhou, and Y. Zhang. Patterns of Near-Crash Events in a Naturalistic Driving Dataset: Applying Rules Mining. Accident Analysis & Prevention. Vol 161(3), 2021.

137. Das, S., Mousavi, S., Shirinzad, M. Pattern Recognition n Speeding Related Motorcycle Crashes. Journal of Transportation Safety & Security. pp. 1-18, 2021.

138. Das, S., S. Chatterjee, and S. Mitra. Improper Passing and Lane-Change related Crashes: Pattern Recognition using Association Rules Negative Binomial Mining. Springer, 2020.

139. Das, S., X.Sun, and M. Sun. Rule-Based Safety Prediction Models for Rural Two-Lane Run-Off-Road Crashes. International Journal of Transportation Science and Technology, 2020.

140. Das, S., B. Storey, T. Shimu, S. Mitra, M. Theel, and B. Maraghepour. Severity Analysis of Tree and Utility Pole Crashes: Applying Fast and Frugal Heuristics. IATSS Research, 2019.

141. Das, S., A. Dutta, and X. Sun. Patterns of Rainy Weather Crashes: Applying Rules Mining. Journal of Transportation Safety and Security, 2019.

142. Das, S., X. Sun, B. Dadashova, M. Rahman, and M. Sun. Sun Glare and Traffic Crashes: Identifying Patterns of Key Factors. Transportation Research Record: Journal of the Transportation Research Board, 2021.

143. Das, S., L. Tran, and M. Theel. Understanding Patterns in Marijuana Impaired Traffic Crashes: A Case Study. Journal of Substance Use, 2020.

144. Das, S., Islam, M., Dutta, A., and Shimu, T. Uncovering Deep Structure of Determinants in Large Truck Fatal Crashes. Transportation Research Record: Journal of the Transportation Research Board, 2020.

145. Das, S., L. Kyle, L. Wu, and R. Henk. Understanding Crash Potential Associated with Teen Driving: Survey Analysis using Multivariate Graphical Method. Journal of Safety Research, 2019.

146. Das, S., and X. Sun. Association Knowledge for Fatal Run-Off-Road Crashes by Multiple Correspondence Analysis. IATSS Research, Vol. 39, Iss. 2, pp. 146–155, 2016.

Trustworthy Artificial Intelligence Models and Tools

147. Wei, Z.,S. Das, and Y. Zhang. Short Duration Crash Prediction for Rural Two-lane Roadways: Applying Explainable Artificial Intelligence. Transportation Research Record: Journal of the Transportation Research Board, 2022.

148. Hasan, A., Jalayer, M., and Das, S. Severity Modeling of Work Zone Crashes in New Jersey Using Machine Learning Models. Journal of Transportation Safety and Security, 2022

149. Rahman, M., S. Das, Sun, X., Sun, M., and Hossain, M. Using Unsupervised Learning to Investigate Injury-Associated Factors of Animal-Vehicle Crashes. International Journal of Injury Control and Safety Promotion, 2022

150. Das, S., Datta, S., Zubaidi, H., Obaid, I. Applying Interpretable Machine Learning to Classify Tree and Utility Pole Related Crash Injury Types. IATTS Research. Vol 45(3), pp. 310-316, 2021
151. Das, S. Artificial Intelligence in Highway Safety. CRC Press, Boca Raton, FL, 2021
152. Das, S. Dutta, A., Dey, K., Jalayer, M., Mudgal, A. Vehicle involvements in hydroplaning crashes: Applying interpretable machine learning. Transportation Research Interdisciplinary Perspectives. Vol 6, 2020
153. Das, S., Dutta, A., Dey, K., Jalayer, M., and Mudgal, A. Single and Multiple Vehicle Crashes due to Hydroplaning: A Case Study of Interpretable Machine Learning. Transportation Research Interdisciplinary Perspectives (TRIP), 2020
154. Das, S., and I. Tsapakis. Interpretable Machine Learning Approach in Estimating Traffic Volume on Low-Volume Roadways. International Journal of Transportation Science and Technology. Vol 9(1), pp. 76-88, 2020
155. Das, S., and I. Tsapakis. Interpretable Machine Learning Approach in Estimating Traffic Volume on Low-Volume Roadways. International Journal of Transportation Science and Technology. Vol 9(1), pp. 76-88, 2020

Advanced Natural Language Processing (NLP) Models for Transportation Science and Public Heath

Knowledge Trends in Transportation Research
156. Das, S. Understanding Fatal Crash Reporting Patterns in Bangladeshi Online Media using Text Mining. Transportation Research Record: Journal of the Transportation Research Board. Vol 2675(10), pp. 960-971, 2022.
157. Das, S. A Short Review of Transportation Research Record Articles: Focusing on Authors, Co-authorships, and Research Trends. TR News. Nov-December Issue (in press), 2020.
158. Das, S., and G. Griffin. Big Data and Transportation Safety: Connecting the Dots. Transportation Research Record: Journal of the Transportation Research Board, 2020.
159. Das, S., Dutta, A., and Brewer, M. Transportation Research Record Articles: A Case Study of Trend Mining. Transportation Research Record: Journal of the Transportation Research Board, 2020.
160. Fitzpatrick, K., R. McCourt, and S. Das. Current Attitudes among Transportation Professionals with Respect to the Setting of Posted Speed Limits. Transportation Research Record: Journal of the Transportation Research Board. Vol. 2673(4), pp. 778-788, 2022.
161. Das, S., K. Dixon, X. Sun, A. Dutta, and M. Zupancich. Trends in Transportation Research: Exploring Content Analysis in Topics. Transportation Research Record: Journal of the Transportation Research Board, Vol. 2614, pp. 27–38, 2017.
162. Das, S., X. Sun, and A. Dutta. Text Mining and Topic Modeling on Compendium Papers from Transportation Research Board Annual Meetings. Transportation Research Record: Journal of the Transportation Research Board, Vol. 2552, pp. 48-56, 2016.

Crash Narrative Analysis and Public Health Issues
163. Kong, X., Zhang, A., Xiao, X., Das, S., Zhang, Y. Work from home in the post-COVID world. Case Studies on Transport Policy, 2022.
164. Das, S., Dutta, A., and Tsapakis, I. Motorcycle Crash Causation Study: Exploratory Topic Models from Crash Narrative Reports. Transportation Research Record: Journal of the Transportation Research Board, 2021.
165. Das, S. Fatal Crash Reporting in Media: A Case Study on Bangladesh. Transportation Research Record: Journal of the Transportation Research Board, 2021.
166. Das, S., Chapter 10: Impact of COVID-19 on industries. COVID-19 and the Environment Impact, Concerns & Management, Elsevier, 2021.
167. Das, S., and A. Dutta. Characterizing Public Emotions and Sentiments in COVID-19 Environment: A Case Study of India. Journal of Human Behavior in the Social Environment, 2020.
168. Trueblood, A., E. Shipp, A. Pant, and S. Das. Farm Equipment Crash Narrative Analysis. Traffic Injury Prevention, 2019.