Special Issue

Advanced Machine Learning and AI Techniques for Winter Weather Traffic Modelling in Cold Region Highways

Message from the Guest Editor

This Special Issue encompasses a broad range of topics related to winter weather traffic modeling in cold regions. The scope includes, but is not limited to, the following:

- Predictive Models: Development and evaluation of machine learning models for predicting traffic flow, congestion, and travel times under winter weather conditions.
- Real-time Traffic Management: AI application for real-time traffic monitoring, incident detection, and decision making during adverse weather events.
- Weather-Integrated Traffic Data: Methods for integrating meteorological data with traffic data to enhance the accuracy and reliability of traffic models.
- Safety Enhancements: AI-driven solutions for improving road safety, reducing accidents, and mitigating the impact of winter weather on highway users.
- Case Studies: Practical examples and success stories of machine learning and AI applications in winter weather traffic management and modeling.
- Comparative Analysis: Comparative studies of different machine learning techniques and their effectiveness in modeling winter weather traffic scenarios.

Guest Editor

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Deadline for manuscript submissions

31 January 2026

Sustainability

an Open Access Journal by MDPI

Impact Factor 3.3
CiteScore 7.7

mdpi.com/si/211710

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I encourage you to contribute a research or comprehensive review article for consideration for publication in *Sustainability*, an international Open Access journal which provides an advanced forum for research findings in areas related to sustainability and sustainable development. *Sustainability* publishes original research articles, review articles and communications. I am confident you will find the journal contributes to enhancing understanding of sustainability and fostering initiatives and applications of sustainability-based measures and activities.

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