Special Issue

Deep Learning Sensor Fusion for Human–Machine Interaction in Intelligent Transportation Systems

Message from the Guest Editors

The application of deep learning-driven human–machine interaction (HMI) in intelligent transportation systems (ITSs) facilitates smarter and safer transportation. Deep learning models can analyze multimodal data from human, environment, and vehicle systems, providing accurate recognition of human behavior, driver intention, and environmental factors and enabling the identification of the human–machine interaction relationship in an ITS. This will grant the creators of autonomous vehicles, traffic control systems, and personal devices an improved understanding of human behavior, improving the relevant decision-making processes and optimizing traffic flow. Furthermore, deep learning-driven HMI can improve safety by predicting accidents or near misses and providing timely interventions through automated alerts or corrective actions, enhancing users' experience, acceptance, and trust.

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