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Preface to the Journal of Smart Cities and Society issue 1(4)

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1. Introduction

This fourth issue of our *Journal of Smart Cities and Society* offers three contributions to the field with reports of innovation in e-health, road infrastructure monitoring, and quality of service on technological infrastructure:

"*eHealth in the time of smart ecosystems and pandemics*" by I. Péntek and A. Adamkó, explores the diversity of citizens' bio-sensory time series data gathered from different co-existing systems and proposes a system architecture which facilitates the integration of those various data repositories. This includes the description of a system which was developed and tested during the pandemic to combine health information from households and health centres.

"*A review on computer vision and machine learning techniques for automated road surface defect and distress detection*" by X. Chen, S. Yongchareon, and M. Knoche, relates to the fundamental smart city resource of transport and analyzes and compares different machine-learning methods and models proposed in the literature and identifies challenges that need to be addressed in the future in road surface defect detection. The review focuses on diagnostic technology of machine vision. The authors highlight advantages and limits of the existing methods for automatic road defect detection and identify areas of improvement for the community to work on.

"*Time-optimized sequential decision making for service management in smart city environments*" by S. Alfahad, C. Anagnostopoulos and K. Kolomvatsos, investigates a solution to optimize the efficiency of edge nodes and their effect in the extended system performance. This is an essential problem in smart cities as they need solutions which can scale up to the large amount of sensing and actuation devices interconnected and on their effect on other clusters. The authors consider providing these nodes a more sophisticated decision-making algorithm, based on the optimal stopping theory, which is illustrated with its application to datasets representing different scenarios of services management showing how it outperforms other edge load management competing algorithms.

The editorial team of this journal expects that the contributions included in this issue will provide new tools to address some of the many challenges ahead to realize this societal paradigm shift and inspires and guides other colleagues in this developing community to further innovate in this sector.

We encourage all sectors of society to engage in this technical conversation as our view of this area as a multidisciplinary one will require the input of various different professions and different levels of involvement within urban environments to produce effective innovation.