





Emerging Mobility in Smart Cities Empowered by Blockchain and Deep Data

Ruiyi Zhao, University of New South Wales (UNSW)

In the ever-evolving landscape of Mobility-as-a-Service (MaaS), it faces complex logistical challenges, from delivery inefficiencies to infrastructure gaps. This research navigates these intricacies, leveraging ethics, blockchain, and MaaS to address these issues.

Ethics, the moral compass guiding societal values, represents a pivotal role within the realm of decentralisation-a fundamental aspect of blockchain technology. Beyond facilitating transactions, blockchain's disruptive capabilities prompt profound reflections on governance norms, ushering in discussions concerning trust, transparency, and sustainability. This intricate interplay between decentralisation and ethical governance lays the foundation for critical discourse.

Blockchain, serving as the linchpin of this technological trinity, offers a decentralised haven that transcends conventional intermediaries. Its immutable ledger, enabled by smart contracts, provides transparency and efficiency, instilling trust within an increasingly interconnected world. The integration of blockchain's decentralised architecture with MaaS ushers in a new era characterised by operational excellence, streamlined transactions, and the democratisation of mobility services.

The framework of Emerging Mobility in Smart Cities Empowered by Blockchain and Deep Data extends far beyond the confines of conventional approaches. It encapsulates the very essence of decentralisation, ethical governance, and trust-building mechanisms. This paradigm shift challenges preconceived notions, fostering innovative solutions that not only optimise last-mile delivery, exemplified by the innovative Last-Mile Delivery Application (LDMA) developed within this research but also reconfigure the very fabric of MaaS itself.

As this research forges ahead, it casts a spotlight on the transformative potential residing at the intersection of Ethics, Blockchain, and MaaS. This convergence promises a holistic evolution of these interconnected domains, underpinning the realisation of Emerging Mobility in Smart Cities. Through the fusion of blockchain's ethical underpinnings and the power of deep data, this research serves as a guide to smart cities toward a sustainable and empowered future, where urban mobility seamlessly aligns with the needs and aspirations of its residents.