Urban Metaverse Cyberthreats and Countermeasures to Mitigate Them

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Abstract

Cybersecurity and privacy protection are the two crucial challenges in making secure and reliable urban metaverse cyberspaces thrive, as cybercrime activities are expected to be rampant in this ecosystem with trillion dollars of economic value in the years to come. Ensuring seamless connectivity, data accuracy, and user privacy are critical aspects that need further attention for the efficacy of urban metaverse cyberspaces with Urban Twins (UTs), particularly, from technical, legislative, and ethical standpoints. A large number of transactions and immersive experiences shall be managed safely in an automated manner in urban metaverse cyberspaces. Cybersecurity measures in urban cyberspaces encounter a unique set of challenges due to the immersive nature of these spaces. In this direction, this study analyses cyberthreats within urban metaverse cyberspaces and basic countermeasures against these threats.

Index Terms—Metaverse, Urban Twins (UTs), Digital Twins (DTs), cybersecurity, cyberthreats, blockchain.

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