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| Paper Type: Original ArticleTransforming User Experience in the Metaverse Through Edge Technology |

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**Abstract** |

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| The Metaverse, an emerging virtual universe, allows real-time interactions and solid social links between humans, akin to the physical world. However, today's cloud-based metaverse infrastructure struggles to meet the metaverse's low latency and high bandwidth requirements. This is where edge computing steps in, moving processing closer to consumers and applications and overcoming these challenges. The Metaverse, as a new distributed computing paradigm for computationally intensive tasks, can be offloaded to the network's edge. In this paper, we first outline the architecture of the metaverse and the driving technologies and underscore the pivotal role of edge computing in the digital infrastructure for realizing the metaverse. We then propose an edge computing-enabled Metaverse, focusing on its performance in terms of rendering, latency, resource allocation, and communication. Finally, we delve into the challenges of implementing edge techniques, ensuring a comprehensive understanding of the topic.  |
| **Keywords:** (Sentence case and followed by colon) followed by 3 to 7 words that describe the focus and contribution of the paper. |

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Table contents and headers must be 10 pt. font, and left aligned.



Fig. 1. Network with eight vertices.

Table 1. List of Arc lengths.

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| **S/N** | **Questions** | **Options** |
| 1 | How often does waste management team visit your locality for waste collection and disposal? | Once a week | Once a month |
| 2 | How do you dispose your household waste? | Bury it in the ground | Burn it |
| 3 | What (category) of waste is dominant in your daily household waste? | Food waste | Plastic waste |

1.1.1 | Variables and equatio**n**s

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|  |  |
| --- | --- |
|  | **(1)** |

 Where

, and b is a number greater than 1.

Be sure that the symbols in your equation have been defined before the equation appears or immediately following. Each equation should be written by MathType in specified style as shown in *Eq. (1)*.

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Acknowledgments

Acknowledgements enable you to thank all those who have helped in carrying out the research. Careful thought needs to be given concerning those whose help should be acknowledged and in what order. The general advice is to express your appreciation in a concise manner and to avoid strong emotive language.

Author Contributaion

For research articles with multiple authors, provide a short paragraph that identifies each contribution. The following statements should be used: "Conceptualization, X.X. and Y.Y.; Methodology, X.X.; Software, X.X.; Validation, X.X., Y.Y. and Z.Z.; formal analysis, X.X.; investigation, X.X.; resources, X.X.; data maintenance, X.X.; writing-creating the initial design, X.X.; writing-reviewing and editing, X.X.; visualization, X.X.; monitoring, X.X.; project management, X.X.; funding procurement, Y.Y. All authors have read and agreed to the published version of the manuscript. Authorship must be limited to those who have made a significant contribution to the work reported. All terms were described in the [**CT**](https://drive.google.com/file/d/18RGWXRr_r2tx6CpUg9c6uV0-S1X9Iu4X/view?usp=sharing)file.

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This section indicates any support that is not included in the Author Contribution or Funding sections. This may include administrative and technical support or in-kind donations (e.g., materials used for experiments).

Data Availability

We encourage all authors to make their research data available. Please indicate where the data supporting the reported findings can be found, including links to publicly archived datasets that were analyzed or generated during the study. If no new data were generated or if data are not available due to privacy or ethical restrictions, an explanation is still required. The suggested Data Availability Statements were collected in [**DAS**](https://drive.google.com/file/d/1uurtjew-arbqOY2Gz9phWYqzR_ssl7F1/view?usp=sharing) file.

Conflicts of Interest

The authors declare no conflict of interest. Authors must declare any personal circumstances or interests that could be considered to have an inappropriate influence on the presentation or interpretation of the reported research findings. Any role of funders in the design of the study, in the collection, analysis, or interpretation of the data, in the writing of the manuscript, or in the decision to publish the results must be disclosed in this section. If this is not the case, please indicate "Funders played no role in the design of the study, in the collection, analysis, or interpretation of the data, in the writing of the manuscript, or in the decision to publish the results." You can see more details in [CID](https://drive.google.com/file/d/10QZBS_E66Z4UTNdP5GhoR5dfsaGe2Jvw/view?usp=sharing) file.

References

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1. Liao, H., & Xu, Z. (2017). Hesitant fuzzy decision making methodologies and applications. Springer Singapore.

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1. McKenzie, R.B. (2018). From robbins to friedman and beyond. In *A brain-focused foundation for economic science* (pp. 63-92), Palgrave Macmillan, Cham. Springer. <https://doi.org/10.1007/978-3-319-76810-6_3>

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1. Murphyn, L. (n.d.). *Utrition & exercise - timing is everything*. NASM. <https://blog.nasm.org/workout-and-nutrition-timing>

Appendix

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When citing an Appendix in the main text, it is essential to reference it accordingly. In the Appendix, any referenced Figures, Tables, equations, etc., should be labeled with an "A" prefix, followed by a sequential numbering starting from 1 (e.g., Fig. A1, Fig. A2, etc.).