



ICIIP-2023

Conference Website: https://www.juit.ac.in/iciip_2023/index.php

Special Session on “Machine Learning-Enhanced Network Slicing and Resource Management in 5G Software-Defined Networks”

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Submission ID through EDAS should be shared at [\[summi.badotra@gmail.com\]](mailto:summi.badotra@gmail.com) } with Subject Line : ICIIP-2023 Special Session Paper “MLENSR”

Unpublished, original contributions are encouraged for submission with less than 15% of similarity score from all sources and less than 5% similarity score from single source.

The deployment of 5G networks has ushered in a new era of connectivity, offering unprecedented speed, low latency, and capacity to support diverse applications, from autonomous vehicles to augmented reality. However, with this increased complexity and variety of services, efficient network management becomes paramount. "Machine Learning-Enhanced Network Slicing and Resource Management in 5G Software-Defined Networks" addresses this critical need by combining the power of machine learning with the agility of Software-Defined Networking (SDN) to optimize resource allocation and network slicing. One key rationale for this research lies in the dynamic nature of 5G networks. These networks are expected to support a multitude of services with varying requirements, such as ultra-reliable low-latency communication (URLLC), massive machine-type communication (mMTC), and enhanced mobile broadband (eMBB). Meeting these diverse demands necessitates adaptive resource allocation. Traditional, static network management approaches fall short in this regard, and manual intervention is impractical given the scale and complexity of 5G infrastructures.

The primary objective of this research is to leverage machine learning to enhance network slicing and resource management in 5G SDNs. By employing machine learning algorithms, the network can autonomously analyze traffic patterns, predict demand fluctuations, and allocate resources accordingly. This leads to several potential benefits:

- **Optimized Resource Utilization:** Machine learning can identify underutilized resources and allocate them to areas with higher demand, improving overall network efficiency.
- **Quality of Service Assurance:** Network slicing can be dynamically adjusted based on real-time requirements, ensuring that each service gets the necessary resources to maintain a high quality of service.
- **Proactive Fault Management:** Machine learning models can predict and preemptively address potential network issues, reducing downtime and enhancing network reliability.

In summary, "Machine Learning-Enhanced Network Slicing and Resource Management in 5G Software-Defined Networks" aims to transform 5G network management into a proactive, adaptive, and efficient process. By harnessing the capabilities of machine learning, this research addresses the dynamic challenges posed by 5G networks and paves the way for a more responsive and cost-effective telecommunications infrastructure.

Authors are invited to submit original research papers, review articles, and case studies related to the above sub-topics. Submissions should adhere to the IEEE conference paper format. All submitted papers will undergo a peer-review process by experts in the field. Accepted papers will be presented at the special session during the conference.

Link to Submit Papers: -

Authors must ensure that their manuscript is in compliance with Manuscript Preparation Guidelines and can submit MAXIMUM of 2 papers to ICIIP 2023 using the EDAS Submission link: <https://edas.info/N31251>

Authors can use [MS Word A4](#) or [LaTeX](#) template for preparing their manuscript and check the PDF for compliance within EDAS conference system and for its further submission.

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Important Dates:

Paper Submission Deadline: [**September 30, 2023**]

Notification of Acceptance: [[October 15, 2023](#)]

Camera-Ready Paper Submission: [[October 30, 2023](#)]

Conference Dates: [**November 22 - 24, 2023**]