  - Satellite and UAV Networks: Incorporating satellite and unmanned aerial vehicle (UAV) networks as part of edge-cloud ecosystems could expand the geographical reach and reliability of resource allocation frameworks.

6.4.3 Policy and Regulatory Considerations

- Frameworks for Global Standards: Research should address how the framework can comply with diverse regulatory requirements across different regions, promoting interoperability.
- Ethical Implications: Investigating the ethical implications of resource allocation decisions, such as fairness and bias, could enhance societal acceptance of the technology

Summary

The future research directions outlined above provide a roadmap for advancing the capabilities and applications of resource allocation frameworks in 5G and beyond. By integrating emerging technologies, addressing sustainability goals, and adapting to new network architectures, future studies can further enhance the efficiency, scalability, and impact of these frameworks.

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