Paper Title:

Challenges in Conglomerating Fog computing with IOT for building Smart City

Paper link:

1 Summary

1.1 Motivation/Purpose/Aims/Hypothesis

The purpose of the research is to explore the drawbacks that centralised cloud systems present for IoT (Internet of Things) devices and analyse how Fog Computing might be used to lower latency and improve efficiency. Fog Computing with the Internet of Things (IoT) is thought to be able to produce stronger and more efficient smart city infrastructure.

1.2 Contribution

Providing the features, uses, and limitations of fog computing within the framework of smart cities constitutes the paper's primary contribution. This leads to the development of more efficient smart city solutions by demonstrating how Fog Computing could enhance the IoT devices' performance and reliability.

1.3 Methodology

The method should include an in-depth examination of the current state of information and previous studies in the area. It includes an in-depth review of fog computing's characteristics and applications as well as the challenges and limitations involved in integrating it with the Internet of Things for the development of smart cities.

1.4 Conclusion

The study comes to the conclusion that fog computing, when integrated with IoT, has several benefits across a range of sectors, including smart grids, smart agriculture, traffic control, waste and water management, and healthcare. Future smart cities could benefit greatly from this integration, which could also open the door to more technologically advanced and environmentally friendly urban areas.

2 Limitations

2.1 First Limitation/Critique

The initial limitation is related to storage, as local or end devices could not have the processing power or storage capacity to finish activities. This constraint makes it difficult to apply fog computing in the infrastructure of smart cities in an effective way..

2.2 Second Limitation/Critique

The second limitation of fog computing is its security issues, which arise from the devices' decentralized architecture and susceptibility to hacks and data breaches. In order to ensure the authenticity and integrity of smart city systems, this security issue must be resolved.

3 Synthesis

The topics discussed in this research have important implications for future scopes and potential uses. Fog Computing with IoT integration has the potential to completely transform smart city infrastructure, resulting in increased security, lower energy consumption, increased efficiency, and improved control of resources. Furthermore, the various and extensive effects of Fog Computing on the future of urban living are demonstrated by its possible uses in smart grids, smart farming, traffic control, water and waste management, and healthcare.