# Edge-Intelligent Vehicular Networks: Leveraging 5G and AI for Predictive Traffic Management in Smart Cities

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**Abstract:** This paper explores how 5G networks,edge computing and AI could be used together to improve traffic management in smart cities. Instead of reacting to problems like traffic jams or accidents after they happen, the goal is to study how intelligent systems could help predict and respond to these issues earlier. The research focuses on how connected and autonomous vehicles might communicate with each other and with edge devices placed across a city. These edge devices, supported by the speed and low latency of 5G, could process traffic data close to where it's collected. This could make traffic control faster and more efficient. The paper also looks into how artificial intelligence at the edge can be used for making predictions about congestion or accidents, and how vehicle data could be shared securely through techniques like federated learning.

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## 4.1 ChatGPT

## 4.2 Scientific discussion

# 5 Conclusion

# 6 Declaration of Originality


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# Bibliography