

Peer Review

Review of: "Large Models Enabled Ubiquitous Wireless Sensing"

Abdullah Alqahtani¹

1. King Saud University, Saudi Arabia

The paper "Large Models Enabled Ubiquitous Wireless Sensing" presents a compelling exploration of channel state information (CSI) prediction using large language models in MIMO-OFDM systems. The integration of AI tools into wireless communication is timely, especially as the demand for reliable, low-latency transmission increases in 5G networks. However, while the proposed framework shows promise, there are several areas that can be further implemented for improvement.

The paper introduces a preprocessing framework that merges geometric-physical knowledge for robust prediction, yet the specifics of this integration remain vague. A more detailed explanation of how this knowledge influences the model's performance would enhance the reader's understanding.

How do you plan to address the limitations of using statistical channels in your current model? Are there plans to incorporate more physical models into the prediction framework?

What specific metrics were used to evaluate the performance of the proposed model compared to traditional methods? Can you provide a more detailed analysis of these comparisons?

In terms of real-world applicability, how would your model perform in highly dynamic environments with rapidly changing user positions?

Could you elaborate on the preprocessing framework that merges geometric-physical knowledge? How does this knowledge specifically impact the accuracy of CSI predictions?

Given the complexity of urban environments, how do you envision scaling your model for larger datasets or more intricate scenarios? What challenges do you foresee in this scaling process?

Declarations

Potential competing interests: No potential competing interests to declare.