

Referee #3:

1. The hybrid approach combining PSInSAR and deep CNNs for predicting subsidence in areas where PSInSAR data is sparse is quite innovative. Given that the paper reports a significant improvement in prediction accuracy compared to traditional interpolation methods, how does the proposed method handle the variability in subsidence-driving factors across different regions? Specifically, could the model be easily adapted or retrained for regions with different geological or climatic conditions, and if so, what would be the primary considerations during this process?

Thank you for your encouraging feedback. In response to your query about the adaptability of our model to regions with varying subsidence-driving factors:

Your question indeed presents an interesting avenue for future research. Based on our findings, the model performs well across large areas with similar climatic and geological conditions. However, when applied to regions with characteristics different from those studied, transfer learning becomes particularly valuable.

Given the diversity in climatic conditions, soil types, and the primary factors driving subsidence across different regions, transfer learning can enhance the model's adaptability. This approach enables the model to incorporate and learn from the specific characteristics of a new region, thereby facilitating its generalization to varied contexts and effectively handling the variability in subsidence-driving factors.

Furthermore, incorporating region-specific geological parameters, such as bedrock depth and soil type, can significantly boost the model's predictive accuracy. By integrating these local variables, the model becomes more attuned to the unique conditions of the region, leading to improved performance in subsidence prediction.