

## Peer Review

# Review of: "Data Integrity vs. Inference Accuracy in Large AIS Datasets"

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The accuracy and completeness of AIS data are critical for maritime management and navigational technologies. This study addresses error detection and correction techniques to enhance AIS data reliability and provides a relatively comprehensive review of existing approaches. However, several aspects could be improved to strengthen the manuscript:

1. The research objective or specific problem statement should be further clarified. AIS anomalies can stem from various causes, such as inaccuracies in onboard navigation equipment, communication instability, data loss, or intentional manipulation (e.g., for smuggling or entering restricted areas). It is recommended that the authors specify the type(s) of anomalies being targeted in this work.
2. The focus on SOG anomalies during berthing operations is relevant, yet the assumption of a Gaussian distribution requires further justification. In addition, SOG anomalies often exhibit temporal dependencies—vessel acceleration and deceleration are typically gradual, and isolated SOG values may not sufficiently reflect abnormal behavior. The current approach of treating data points independently may need further discussion.
3. The methodological and concluding sections could be more clearly structured. The main findings and contributions of the study should be explicitly highlighted to improve clarity and coherence.

## Declarations

**Potential competing interests:** No potential competing interests to declare.