

The authors employ Masked Autoencoders (MAE) to tackle the challenge of filling gaps in high-resolution (1km) sea surface temperature (SST) fields arising from cloud cover. These gaps often lead to discontinuities in the SST data and produce blurry imagery in blended SST products. Their work demonstrates that the application of this machine learning method yields significantly superior results when compared to traditional optimal interpolation techniques.

The analysis is robust, and the results appear to possess credibility. The authors deserve commendation for their noteworthy contribution and the compelling nature of their paper. While the paper is generally well-written, there are a few minor improvements that could enhance its quality, as outlined below.

Figure 11: It would be beneficial to include additional realistic examples, perhaps at least one more, to facilitate a more in-depth discussion of differences between patterns. Consider showcasing results that incorporate realistic cloud cover scenarios. Moreover, evaluating the reconstruction over several days for the same area can help demonstrate the temporal consistency of the reconstructed fronts.

Discussion Section: The paper could be strengthened by presenting a reconstruction over an extensive area with continuous cloud cover. This would help in assessing the limitations and boundaries of the extensive area. Quantifying these limits can provide valuable insights.

Figures: It is recommended to recreate figures such as Figures 10, 2, and 7 with larger dimensions and include informative titles to improve their clarity and comprehensibility.

By implementing these minor adjustments, the paper can further enhance its impact and deliver a more comprehensive understanding of the authors' contributions.