Dear Editor-in-Chief,

I am pleased to submit our manuscript entitled "VALLEY-FORECAST: FORECASTING COCCIDIOIDOMYCOSIS INCIDENCE VIA ENHANCED LSTM MODELS TRAINED ON COMPREHENSIVE METEOROLOGICAL DATA" for consideration for publication in the Journal of Biomedical Informatics.

This research presents a novel application of advanced machine learning techniques, specifically Long Short-Term Memory (LSTM) and extended Long Short-Term Memory (xLSTM) models, to predict Coccidioidomycosis (Valley Fever) incidence based on comprehensive meteorological data. Our study demonstrates significant improvements in predictive accuracy compared to traditional statistical methods, with the xLSTM model achieving a 49.13% reduction in Root Mean Squared Error over the baseline.

We believe our work is particularly relevant to the Journal of Biomedical Informatics for the following reasons:

1. It represents the first application of xLSTM networks in epidemiological forecasting using environmental data.

2. The study provides insights into the complex relationships between long-term weather patterns and disease incidence, which could inform public health strategies.

3. Our approach demonstrates the potential of advanced machine learning techniques in improving disease outbreak predictions, a critical area in biomedical informatics.

This manuscript has not been published or submitted for publication elsewhere. All authors have approved the manuscript and agree with its submission to the Journal of Biomedical Informatics. We have no conflicts of interest to disclose.

We have adhered to all ethical guidelines and included statements on data availability and acknowledgments in the manuscript.

Thank you for your consideration of our work. We look forward to your response.

Sincerely,

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