Paper Validation Report for RockBurst.AI

Correspondence: Yes
Percentages: 80.0%

Conclusion:

The codebase implements the core components and workflow described in the paper's experimental section, including HDBSCAN clustering, KNN for gap filling, and SSA for time series forecasting. The scripts support the clustering, discretization, merging, and analysis pipeline on generic seismic-like datasets, aligning with the composite modeling approach from the paper. Utility functions for FAR/MAR calculation are not explicitly shown, nor are tabulated results or synthetic dataset generation scripts, so full reproducibility of reported experimental metrics and results is not directly guaranteed. Example usage and orchestration scripts mirror the described analytical procedure, but some experiment-specific details (e.g., data splits, metric calculation, exact evaluation loop) would need to be reconstructed by the user. Overall, there is substantial compliance in methodology and workflow, but a lack of complete automation and reporting for full experiment reproduction lowers the score.