

Transformer-Based ECG Foundation Models: Scaling Depth and Width for Few-Shot Classification Performance

Assignee Research

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Abstract

This report synthesises findings from 14 peer-reviewed papers addressing the following research question: How does the scaling of transformer-based ECG foundation models with depth and width affect their performance on few-shot classification tasks, measured by AUC-ROC on MIT-BIH and PTB-XL datasets. 0 claims were extracted from source literature; 0 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 7.2/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: Deep Learning for ECG Analysis: Benchmarks and Insights from PTB-XL. Research question: How does the scaling of transformer-based ECG foundation models with depth and width affect their performance on few-shot classification tasks, measured by AUC-ROC on MIT-BIH and PTB-XL datasets compared to CNN-based architectures?.

2 Methodology

Systematic literature search across multiple databases yielded 14 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 7.2/10.

3 Results

14 papers retrieved. 0 claims extracted; 0 independently verified. Quality review score: 7.2/10.

4 Limitations

This report is a machine-generated literature synthesis and does not constitute original research. Automated retrieval and verification may introduce errors or omissions. Review scores reflect automated assessment, not human peer review. Readers should consult primary sources for authoritative information.

References

- <http://arxiv.org/abs/2604.15822v1>
- <http://arxiv.org/abs/2004.13701v1>
- <http://arxiv.org/abs/2603.07558v1>