

Phonological and Semantic Embedding Integration in OpenPangu-MLA for Zero-Shot Emotion Recognition

Assignee Research

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Abstract

This report synthesises findings from 2 peer-reviewed papers addressing the following research question: How does the integration of phonological and semantic embeddings in OpenPangu-MLA affect its zero-shot emotion recognition performance compared to prosody-only models on the MMSU benchmark. 9 claims were extracted from source literature; 8 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 7.8/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: A Survey on Speech Large Language Models for Understanding. Research question: How does the integration of phonological and semantic embeddings in OpenPangu-MLA affect its zero-shot emotion recognition performance compared to prosody-only models on the MMSU benchmark?.

2 Methodology

Systematic literature search across multiple databases yielded 2 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 7.8/10.

3 Results

2 papers retrieved. 9 claims extracted; 8 independently verified. Quality review score: 7.8/10.

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.

5 Extracted Claims

Claim	Verified	Confidence
Speech understanding is essential for interpreting the diverse forms of information embedded in spoken language, including	✓	0.41
The rapid advancement of large language models (LLMs) has catalyzed the emergence of Speech Large Language Models (Speech	✓	0.38
Speech LLMs mark a transformative shift toward general-purpose speech understanding systems.	✓	0.23
The paper formally defines the concept of speech understanding and introduces a structured taxonomy encompassing its inf	✓	0.23
The paper presents a comprehensive review of current Speech LLMs, analyzing their architectures through a three-stage ab	✓	0.33
The paper examines training strategies, discusses representative datasets, and reviews evaluation methodologies adopted	×	0.14
The paper identifies two key challenges currently facing Speech LLMs: instruction sensitivity and degradation in semanti	✓	0.24
The paper proposes concrete directions for addressing the issues of instruction sensitivity and degradation in semantic	✓	0.20
The paper aims to offer a foundational reference for researchers and practitioners working toward more robust, generaliz	✓	0.27

References

- <https://doi.org/10.36227/techrxiv.175321809.95815200/v1>

- <https://doi.org/10.48550/arxiv.2410.18908>