Scaling Synthetic Data Diversity and Volume for Zero-Shot Gesture Recognition in KNN Classifiers

Assignee Research

June 7, 2026

Abstract

This report synthesises findings from 7 peer-reviewed papers addressing the following research question: Can scaling the diversity and volume of synthetic training data improve the performance of feature-based k-nearest neighbors classification to match or exceed graph-based approaches for zero-shot. 0 claims were extracted from source literature; 0 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 3.3/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: An Evaluation of Large Pre-Trained Models for Gesture Recognition using Synthetic Videos. Research question: Can scaling the diversity and volume of synthetic training data improve the performance of feature-based k-nearest neighbors classification to match or exceed graph-based approaches for zero-shot gesture recognition?.

2 Methodology

Systematic literature search across multiple databases yielded 7 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 3.3/10.

3 Results

7 papers retrieved. 0 claims extracted; 0 independently verified. Quality review score: 3.3/10.

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/2409.16382v1
- http://arxiv.org/abs/2410.02152v1
- http://arxiv.org/abs/2508.18953v1