How does ViPRA's continuous latent action representation compare to discrete action tokenization in terms of s

Assignee Research

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Abstract

Learning robot policies using imitation learning requires collecting large amounts of costly action-labeled expert demonstrations, which fundamentally limits the scale of training data. A promising approach to address this bottleneck is to harness the abundance of unlabeled observations-e.g., from video demonstrations-to learn latent action labels in an unsupervised way. However, we find that existing methods struggle when applied to complex robot tasks requiring fine-grained motions. We design continuous latent action models (CLAM) which incorporate two key ingredients we find necessary for l

1 Introduction

This paper examines: CLAM: Continuous Latent Action Models for Robot Learning from Unlabeled Demonstrations. Research question: How does ViPRA's continuous latent action representation compare to discrete action tokenization in terms of sim-to-real transfer success rates on the RT-1 and BridgeData v2 benchmarks?.

2 Methodology

Systematic literature search across multiple databases yielded 12 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

12 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/2511.07732v2
- http://arxiv.org/abs/2508.11117v1
- http://arxiv.org/abs/2505.04999v1