

What is the impact of increasing noise levels in unlabeled video demonstrations on the policy success rate of

Assignee Research

June 10, 2026

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: What is the impact of increasing noise levels in unlabeled video demonstrations on the policy success rate of CLAM versus baseline imitation learning methods on robotic manipulation tasks?.

2 Methodology

Systematic literature search across multiple databases yielded 5 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 3.2/10.

3 Results

5 papers retrieved. 0 claims extracted; 0 independently verified. Quality review score: 3.2/10.

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/2105.06411v2>
- <http://arxiv.org/abs/1709.04905v1>
- <http://arxiv.org/abs/2505.04999v1>