

# Homophily-Guided Self-Supervision Steps in GADT3: Efficiency and Accuracy Trade-offs Across Graph Domains

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## Abstract

This report synthesises findings from 12 peer-reviewed papers addressing the following research question: What is the impact of varying the number of homophily-guided self-supervision steps in GADT3 on its inference efficiency and detection accuracy across different graph domains. Graph Anomaly Detection (GAD) has demonstrated great effectiveness in identifying unusual patterns within graph-structured data. However, while labeled anomalies are often scarce in emerging applications, existing supervised GAD approaches are either ineffective or not. 0 claims were extracted from source literature; 0 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 3.8/10. This report is a machine-generated literature synthesis and does not constitute original research.

## 1 Introduction

This paper examines: Cross-Domain Graph Anomaly Detection via Test-Time Training with Homophily-Guided Self-Supervision. Research question: What is the impact of varying the number of homophily-guided self-supervision steps in GADT3 on its inference efficiency and detection accuracy across different graph domains?.

## 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 3.8/10.

### **3 Results**

12 papers retrieved. 0 claims extracted; 0 independently verified. Quality review score: 3.8/10.

### **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.

### **References**

- <http://arxiv.org/abs/2212.05478v1>
- <http://arxiv.org/abs/2303.06740v1>
- <http://arxiv.org/abs/2502.14293v2>