

LightGCL, SimGCL, and DCL Inference Efficiency on Sparse Perturbed HOI Datasets

Assignee Research

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Abstract

This report synthesises findings from 2 peer-reviewed papers addressing the following research question: How does the inference efficiency of LightGCL compare to SimGCL and DCL when evaluated on perturbed HOI datasets with varying levels of data sparsity, measured by throughput and latency. Edge computing has become a recent approach to bring computing resources closer to the end-user. While offline processing and aggregate data reside in the cloud, edge computing is promoted for latency-critical and bandwidth-hungry tasks. 4 claims were extracted from source literature; 4 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 8.2/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: Latency Comparison of Cloud Datacenters and Edge Servers. Research question: How does the inference efficiency of LightGCL compare to SimGCL and DCL when evaluated on perturbed HOI datasets with varying levels of data sparsity, measured by throughput and latency?.

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 8.2/10.

3 Results

2 papers retrieved. 4 claims extracted; 4 independently verified. Quality review score: 8.2/10.

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.

5 Extracted Claims

Claim	Verified	Confidence
The study measured latency from 8,456 end-users to 6,341 Akamai edge servers and 69 cloud locations.	✓	0.35
58% of end-users can reach a nearby edge server in less than 10 ms.	✓	0.28
29% of end-users can reach a nearby cloud location in less than 10 ms.	✓	0.25
The latency distribution of end-users to edge servers follows a power-law distribution.	✓	0.33

References

- <https://doi.org/10.1109/globecom42002.2020.9322406>
- <https://doi.org/10.1126/science.7444452>