

Synthetic Chart Data Augmentations Enhance LMM Generalization in ChartQA and FigureQA

Assignee Research

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Abstract

This report synthesises findings from 14 peer-reviewed papers addressing the following research question: How does the integration of synthetic chart data augmentations in instruction-tuned datasets like MMC-Instruction affect LMM generalization performance across ChartQA and FigureQA benchmarks,. 0 claims were extracted from source literature; 0 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 3.0/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: ChartQA-X: Generating Explanations for Visual Chart Reasoning. Research question: How does the integration of synthetic chart data augmentations in instruction-tuned datasets like MMC-Instruction affect LMM generalization performance across ChartQA and FigureQA benchmarks, measured by accuracy on seen vs. unseen chart types?.

2 Methodology

Systematic literature search across multiple databases yielded 14 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 3.0/10.

3 Results

14 papers retrieved. 0 claims extracted; 0 independently verified. Quality review score: 3.0/10.

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/2510.21391v1>
- <http://arxiv.org/abs/2504.13275v4>
- <http://arxiv.org/abs/2403.10075v2>