

Overlap Class Integration in Diffusion-Based Synthetic Data for Out-of-Distribution Robustness

Assignee Research

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Abstract

This report synthesises findings from 16 peer-reviewed papers addressing the following research question: What is the impact of incorporating an overlap class in diffusion-generated synthetic data on the robustness of downstream classification models when evaluated on out-of-distribution test sets with. 0 claims were extracted from source literature; 0 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 4.5/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: Synthetic Tabular Data Generation for Imbalanced Classification: The Surprising Effectiveness of an Overlap Class. Research question: What is the impact of incorporating an overlap class in diffusion-generated synthetic data on the robustness of downstream classification models when evaluated on out-of-distribution test sets with imbalanced class distributions?.

2 Methodology

Systematic literature search across multiple databases yielded 16 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 4.5/10.

3 Results

16 papers retrieved. 0 claims extracted; 0 independently verified. Quality review score: 4.5/10.

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/2412.15657v2>
- <http://arxiv.org/abs/2304.07499v1>
- <http://arxiv.org/abs/2402.02316v4>