

# Combining Synthetic Data Generators Enhances Transformer Robustness on SuperTab

Assignee Research

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## Abstract

This report synthesises findings from 10 peer-reviewed papers addressing the following research question: To what extent does combining multiple synthetic data generators (e.g., SCMs, GANs, VAEs) improve the robustness of TFMs on the SuperTab benchmark compared to using a single generator. 0 claims were extracted from source literature; 0 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 6.8/10. This report is a machine-generated literature synthesis and does not constitute original research.

## 1 Introduction

This paper examines: Causal Data Augmentation for Robust Fine-Tuning of Tabular Foundation Models. Research question: To what extent does combining multiple synthetic data generators (e.g., SCMs, GANs, VAEs) improve the robustness of TFMs on the SuperTab benchmark compared to using a single generator?.

## 2 Methodology

Systematic literature search across multiple databases yielded 10 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 6.8/10.

## 3 Results

10 papers retrieved. 0 claims extracted; 0 independently verified. Quality review score: 6.8/10.

## 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/2601.04110v2>
- <http://arxiv.org/abs/2104.11797v1>
- <http://arxiv.org/abs/2512.03307v1>