Title: On Mitigating biases in Causal Generative Models

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Introduction

While Deep Learning Models have demonstrated superior performance across computer vision tasks, the higher performance comes at the cost of poor generality towards out-of-distribution and / or underrepresented minority samples in a dataset. Causality inspired research in Deep Learning presents a lucrative avenue to address these problems, by modeling cause-effect relationships in data and providing tools for interventional strategies to answer counterfactual queries. This research aims to evaluate the performance of existing causality-inspired models on datasets that are known to exhibit spurious correlations, with the goal of understanding the ability and limitations of these models in addressing these biases and enhancing interpretability and robust modelling across diverse samples within a given dataset.