# Improving Variational AutoEncoders Reconstruction for Causal Inference: Replicating methods proposed by "Taming VAE"

Advanced Project - Fall 2024

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February 2, 2025

Github: https://github.com/Sifael/Advanced-Project-II

This paper explores the application of Variational AutoEncoders (VAEs) in the domain of causal inference, with a particular focus on replicating the methods introduced in "Taming VAE." Traditional VAEs have proven effective in learning latent representations for generative tasks; however, their application to causal inference remains limited due to issues such as poor disentanglement and latent variable misalignment. By incorporating architectural enhancements such as GECO-VAEs proposed in Taming VAEs, this paper aims to reproduce the work and offer analysis on limitation to improve the foundational VAE architectures that can be adapted and leveraged in causal inference for high-resolution images such as medical image datasets.