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CycleGANs can bridge to understanding/closing the reality gap for CMB simulations

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Deep learning models demonstrate a considerable improvement in machine learning problems. On the other hand, using more complex models leads to less model interpretability if one needs to analyze and extract the most important features.
Layer visualization techniques and CycleGAN are proposed for finding important features/regions. For example, the results can be potential biometrics in medical images.
In this study, we used CycleGAN to translate images between CMB simulation to Planck observations. We also showed how one can find differences between simple simulations and model the simulation pipeline using CycleGAN.

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