MAP Optimization with NFs

$$\mathbf{x} = G_\theta(\mathbf{z})$$

What would the generative model be?

$$\|A\mathbf{x} - \mathbf{d}\|_2 = \|AG_\theta(\mathbf{z}) - \mathbf{d}\|_2$$

GAN will be more susceptible to poor performance for out-of-training-distribution samples.

A normalizing flow which can theoretically fit anything so nothing out of its range.

Asim, Muhammad, et al. "Invertible generative models for inverse problems: mitigating representation error and dataset bias." International Conference on Machine Learning. PMLR, 2020.

Reparameterized optimization with NF for photoacoustic imaging