

1. L0 finds nonzero parameters. L1 measures the sparsity without considering the inter-element correlations. L2 can prevent overfitting a model
2. Since the images have sharp edges I would want to focus on capturing the edges so my formulation would be $\operatorname{argmin} \int \|\nabla I(x) - f(x)\|_2^2 dx$
3. Since the images are wildlife, the edges aren't as important so my formulation would simply be $p=Hf$