THE UNIVERSITY OF CHICAGO

Department of Statistics
MASTER'S THESIS PRESENTATION

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Variational Autoencoder with Spatial Transformations

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ABSTRACT

The variational auto-encoder (VAE) is an important subclass of generative models. By utilizing latent variables to represent an intractable probability distribution, the VAE not only allows us to capture the complex structure of the data but also enables us to efficiently draw samples from the distribution of interest. This paper builds upon two previous works on augmenting the VAE with spatial transformations for the image generation task. By making additional structural assumptions about latent variables, we'll demonstrate the success and failure of image generation by manipulating the latent space configurations.