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*Deep Generative Learning Leveraging Pretrained Large Models*

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This talk focuses on statistical generative models leveraging pretrained large models. We will first introduce two generative learning models: generative adversarial networks and denoising diffusion models. We then use two examples to illustrate generative modeling with the help of a pretrained large model. The first example considers protein data analysis based on data representations learned through a pretrained model using a protein sequence database. The second example demonstrates a Bayesian fine-tuning approach for image generation leveraging a pretrained large diffusion model.