NEURAL INFORMATION PROCESSING SYSTEMS

GSAI-ML
高瓴机器学习小组

# Diffusion Models and Semi-Supervised Learners Benefit Mutually with Few Labels

Zebin You, Yong Zhong, Fan Bao, Jiacheng Sun, Chongxuan Li, Jun Zhu

Project page: https://ml-gsai.github.io/DPT-demo

Paper: https://arxiv.org/2302.10586

# Key question in Diffusion Model



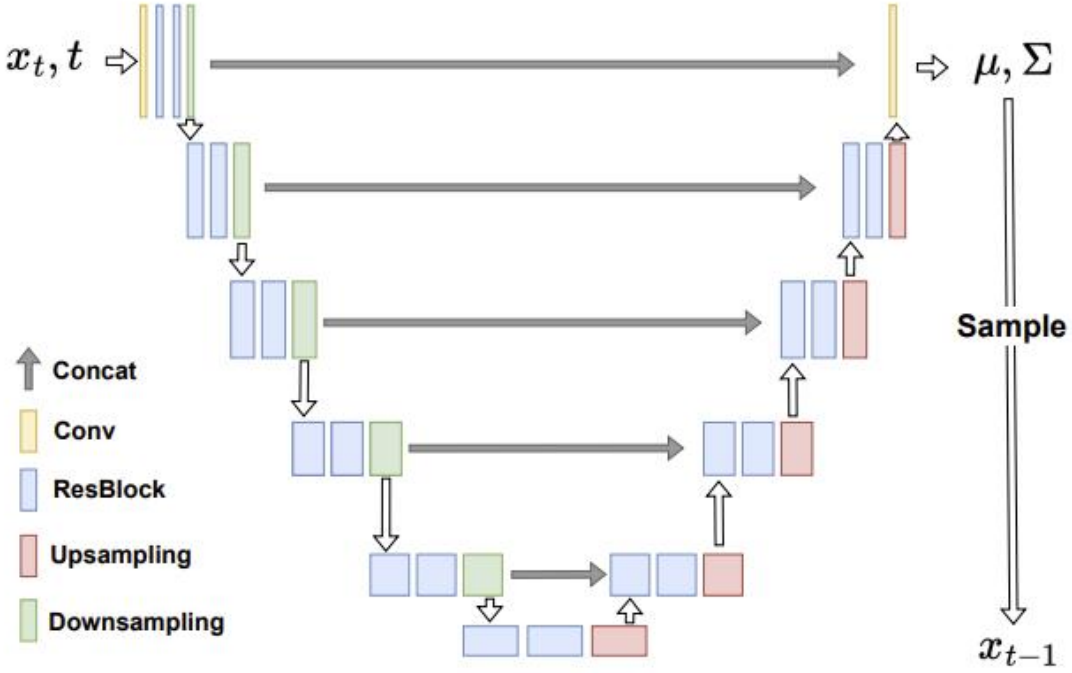
labeled data

"bird" "panda"

how?

unlabeled data

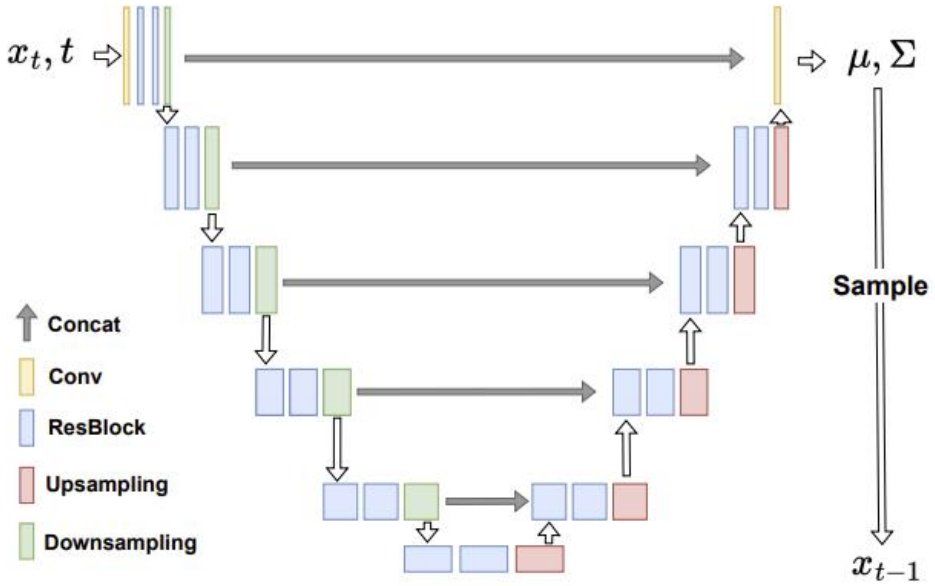
diffusion model



# Key question in Semi-supervised Classification



diffusion model

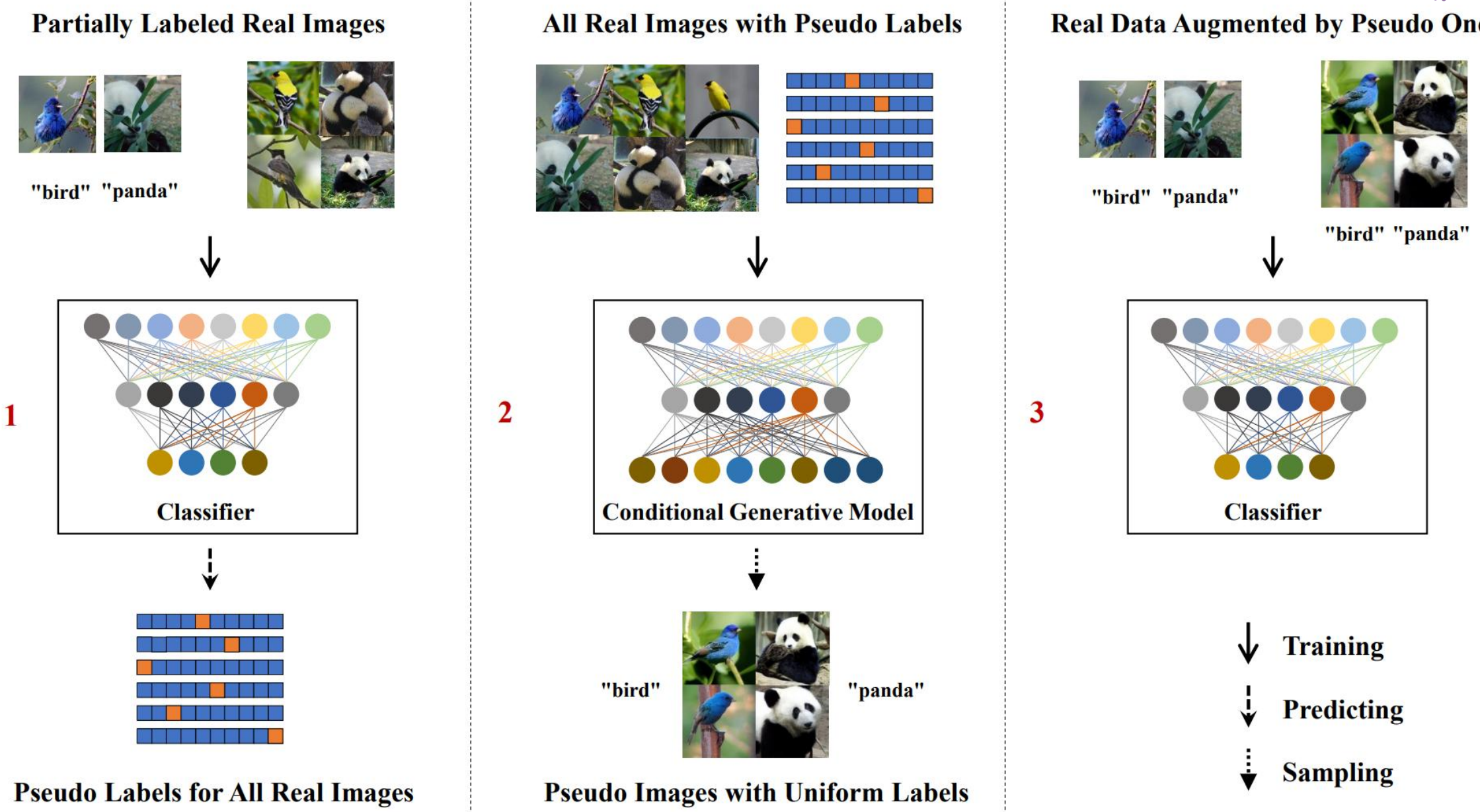



generated images

useful?

Classifier

# Our method

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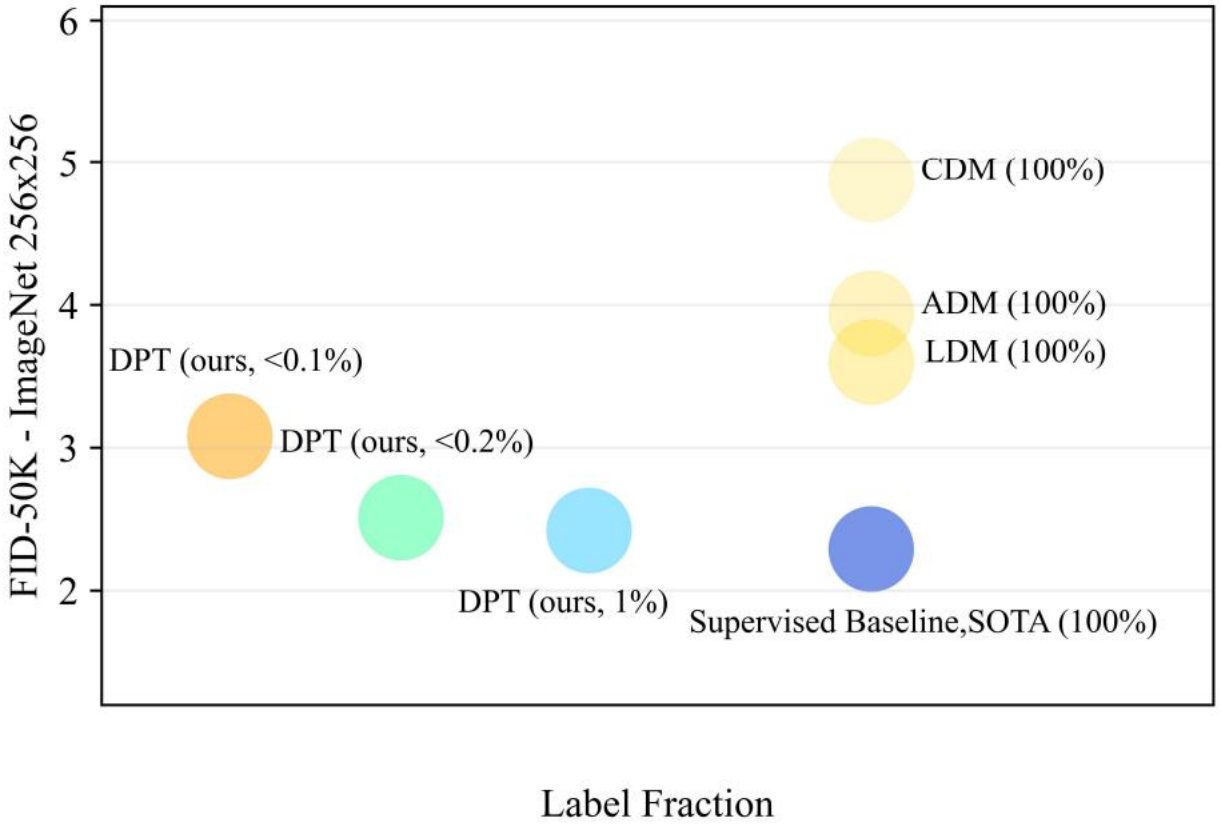
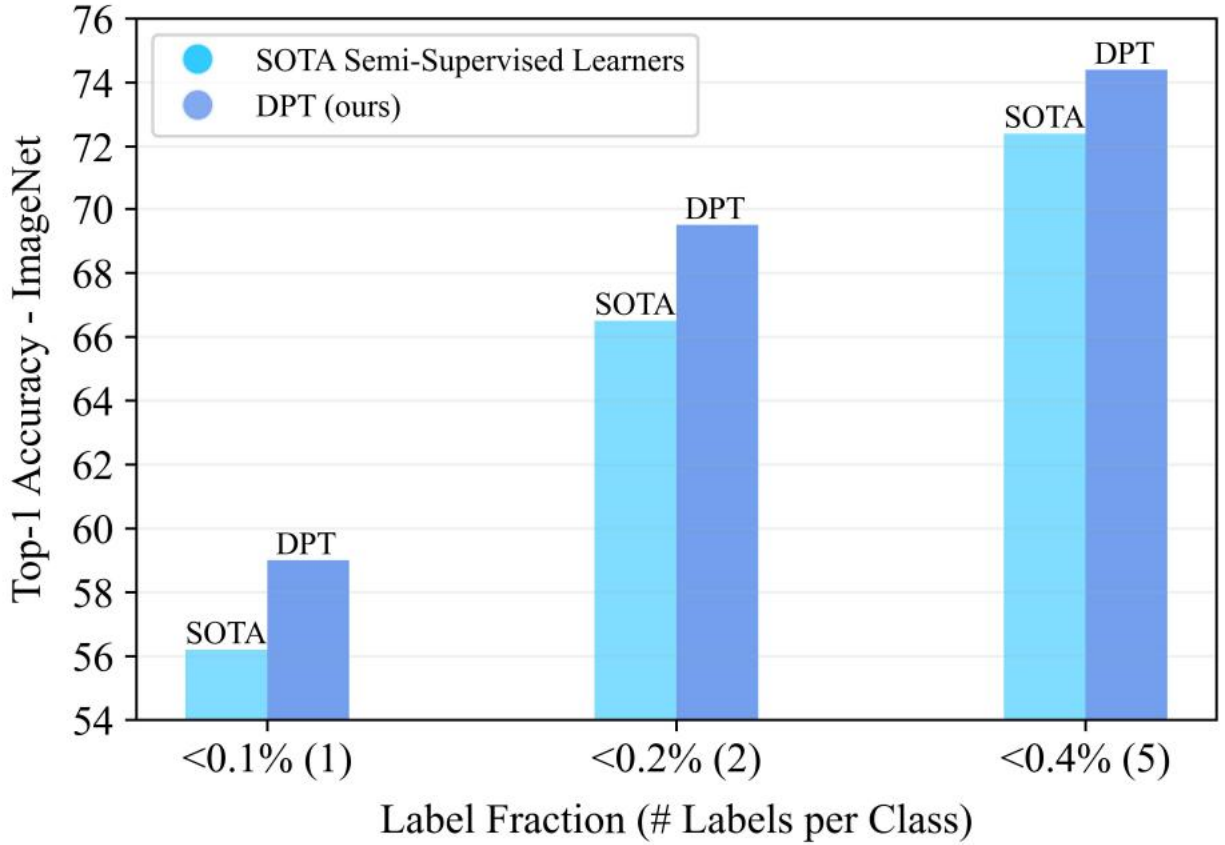
# Quantitative experimental results

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# Qualitative experimental results

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# Summary

- We introduce DPT, a simple but effective method designed to push the boundaries of semi supervised diffusion models and classifiers.
- We believe that DPT will inspire future explorations in diffusion models and semi-supervised learning.

Email：zebin@ruc.edu.cn

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