

Practice Problems 10

Machine Learning

1. Solve the following exercises from [Bis24]:
 - (a) 19.2 pg 578
 - (b) 19.5 pg 579
 - (c) 19.6 pg 579
2. Train a variational autoencoder for the fashion MNIST dataset. Use a latent space of dimension 10.
3. Explain what each latent feature is encoding. Illustrate your explanation with visualizations.
4. Choose two image from different classes. Create a set of images that represent a smooth transition from one image to the other.

References

[Bis24] Bishop, C. M. & Bishop H. Deep Learning: Foundations and Principles, Springer, 2024.