



List of topics to cover
With section titles and brief explanations.

Yiftach Kolb
Berlin, August 8, 2022

Freie Universität



Berlin

Abstract

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Declaration

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Acknowledgement

punkt.[3] punkt.

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Chapter 1

Introduction

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Chapter 2

Autoencoders, VAEs, and Variance inference

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Remark 2.1. My remark[See [4]] This is interesting punkt.

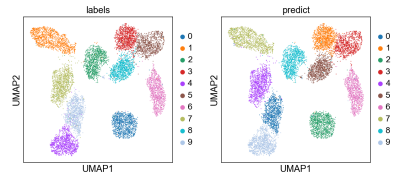
Chapter 3

Gaussian mixture model VAEs

Theoretical background and with some examples from publications and my own tests.



(a)



(b)

Figure 3.1: a figure

Chapter 4

Datasets which were tested and results

some words about (sc)RNAseq and published papers where AE and VAE models have been applied. What we were hoping to achieve and compare with.

Chapter 5

Discussion, some remarks and conclusions

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Bibliography

- [1] Christopher M Bishop and Nasser M Nasrabadi. *Pattern recognition and machine learning*. Vol. 4. 4. Springer, 2006.
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- [3] Diederik P Kingma and Max Welling. “Auto-encoding variational bayes”. In: *arXiv preprint arXiv:1312.6114* (2013).
- [4] Alireza Makhzani et al. “Adversarial autoencoders”. In: *arXiv preprint arXiv:1511.05644* (2015).