

Quiz review

Started on	Wednesday, 13 March 2024, 4:31 PM
State	Finished
Completed on	Wednesday, 13 March 2024, 4:33 PM
Time taken	2 mins 44 secs
Marks	10.00/10.00
Grade	100.00 out of 100.00

Question 1

Correct
Mark 1.00 out of 1.00

What is the primary role of autoencoders in generative modeling?

- 47562
- ☐ Regression
 - ☒ Data compression and reconstruction✔
 - ☐ Data classification
 - ☐ Image recognition
 - ☐ Clustering

The correct answer is: Data compression and reconstruction

Question 2

Correct
Mark 1.00 out of 1.00

In which application might you use a VAE for generating new, coherent samples?

- 47562
- ☐ Text translation
 - ☐ Image classification
 - ☐ Time series forecasting
 - ☐ Speech recognition
 - ☒ Designing virtual fashion items✔

The correct answer is: Designing virtual fashion items



Question 3

Correct

Mark 1.00 out of 1.00

In the context of Variational Autoencoders (VAEs), what does variational inference help achieve?

- ☐ Faster training speeds
- ☐ Improved image resolution
- ☒ Approximation of complex posterior distributions ✓
- ☐ Direct computation of posterior distributions
- ☐ Reduction of model parameters

The correct answer is: Approximation of complex posterior distributions

Question 4

Correct

Mark 1.00 out of 1.00

Reparameterization trick is used to...

- ☐ Improve model accuracy
- ☒ Deal with the non-differentiability of sampling in VAEs ✓
- ☐ Speed up training
- ☐ Reduce model size
- ☐ None of the given options

The correct answer is: Deal with the non-differentiability of sampling in VAEs

Question 5

Correct

Mark 1.00 out of 1.00

Which application does NOT typically use VAEs?

- ☐ Anomaly detection in industrial equipment
- ☐ Medical imaging enhancement
- ☐ Face generation for video games
- ☒ Text summarization ✓
- ☐ Fashion design

The correct answer is: Text summarization

Question 6

Correct

Mark 1.00 out of 1.00

Which of the following is NOT a type of autoencoder?

- ☐ Contractive autoencoder
- ☐ Variational autoencoder
- ☐ Sparse autoencoder
- ☐ Denoising autoencoder
- ☒ Supervised autoencoder ✓

The correct answer is: Supervised autoencoder

Question 7

Correct

Mark 1.00 out of 1.00

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What does VAE stand for?

- ☒ Variational Autoencoder ✓
- ☐ Vectorized Autoencoder
- ☐ None of the given options
- ☐ Virtual Autoencoder
- ☐ Variable Autoencoder

The correct answer is: Variational Autoencoder

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Question 8

Correct

Mark 1.00 out of 1.00

Why is the reparameterization trick crucial in training VAEs?

- ☐ It speeds up the training process
- ☒ It allows backpropagation through stochastic nodes ✓
- ☐ It increases the model's accuracy
- ☐ It reduces the need for labeled data
- ☐ It reduces the model's complexity

47562

The correct answer is: It allows backpropagation through stochastic nodes

Question 9

Correct

Mark 1.00 out of 1.00

Which component of the VAE loss function ensures the latent variables adhere to a standard distribution?

- ☐ Hinge loss
- ☐ Cross-entropy
- ☒ KL divergence ✓
- ☐ Absolute error
- ☐ Mean squared error

The correct answer is: KL divergence

Question 10

Correct

Mark 1.00 out of 1.00

Why are autoencoders considered generative models?

- ☐ They are used for supervised learning
- ☐ They always reduce data dimensionality
- ☒ They can reconstruct and generate data similar to the input ✓
- ☐ They are only used for image data
- ☐ They are a type of neural network

The correct answer is: They can reconstruct and generate data similar to the input

◀ Introduction to Generative Models - Post Quiz

Jump to...

Variational Autoencoders ▶