



What criterion is used to determine if a data point is anomalous?



- ☐ If its error is below mean error
- ☐ If its error is above median error
- ☐ If its error is in the top 10%
- ☐ If its error is above mean error
- ☒ If its error is above the 99th percentile✓

The correct answer is: If its error is above the 99th percentile

Question 5

1.00/1.00

What is the VAE trained to learn effectively?

- ☐ A highly detailed representation of the data
- ☐ A textual description of the data
- ☐ A noisy representation of the data
- ☒ A compressed representation of the data✓
- ☐ A visual representation of the data

The correct answer is: A compressed representation of the data

Question 6

1.00/1.00

Which of the following is NOT an attribute in the given data?

- ☐ Vibration
- ☐ Pressure
- ☐ Timestamp
- ☐ Temperature
- ☒ Humidity✓

The correct answer is: Humidity

Question 7

1.00/1.00

What does the VAE attempt to minimize during training?

- ☒ Loss✓
- ☐ Training time
- ☐ Validation accuracy
- ☐ Data input size
- ☐ Latent space dimensions

The correct answer is: Loss



Question 8

1.00/1.00

What type of dataset does the manufacturing plant collect?

- ☐ Text Dataset
- ☐ Tabular Dataset
- ☐ Audio Dataset
- ☒ Time Series Dataset✓
- ☐ Image Dataset

The correct answer is: Time Series Dataset

Question 9

1.00/1.00

What is a primary application of VAEs mentioned in the case study?

- ☐ Object Detection
- ☒ Anomaly Detection✓
- ☐ Text Summarization
- ☐ Image Classification
- ☐ Speech Recognition

The correct answer is: Anomaly Detection

Question 10

1.00/1.00

How is the data divided for training the VAE?

- ☐ 70-30
- ☒ 80-20✓
- ☐ 60-40
- ☐ 50-50
- ☐ 90-10

The correct answer is: 80-20

Question 11

1.00/1.00

For how many epochs is the VAE trained?

- ☐ 25
- ☐ 10
- ☐ 40



- 100
- 50✓



The correct answer is: 50



Question 12

1.00/1.00

Why is data preprocessing required before training the VAE?

- To make the data unreadable
- To introduce errors into the data
- To make the data larger
- To ensure it is suitable for training✓
- To make the data look visually appealing

The correct answer is: To ensure it is suitable for training

Question 13

1.00/1.00

What two components combine to form the VAE's loss?

- MSE and Cross-entropy
- Classification error and Regression loss
- MSE and KL divergence✓
- L1 loss and L2 loss
- KL divergence and Cross-entropy

The correct answer is: MSE and KL divergence

Question 14

1.00/1.00

Why is understanding the VAE's outputs challenging?

- They are always correct
- They are highly interpretable
- They are too simplistic
- They use an unknown language
- They can be complex and non-intuitive✓

The correct answer is: They can be complex and non-intuitive

Question 15

1.00/1.00



50%



In the VAE, what does the sampling function introduce?

- ☐ Recursion
- ☐ Parallelism
- ☐ Determinism
- ☒ Randomness ✓
- ☐ Linearity

The correct answer is: Randomness