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State

Finished

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Thursday, 6 February 2025, 11:11 PM

Time taken

3 mins 48 secs

Marks

9.00/10.00

Grade

90.00 out of 100.00

### Question 1

1.00/1.00

How is the likelihood of data given a model symbolized?

- ☒  $P(\text{data} \mid \text{model})$  ✓
- ☐  $P(\text{model} \mid \text{data})$
- ☐  $P(\text{data} \ \& \ \text{model})$
- ☐  $P(\text{data})$
- ☐  $P(\text{model})$

The correct answer is:  $P(\text{data} \mid \text{model})$

### Question 2

1.00/1.00

For what tasks can generative models be applied?

- ☐ Data labeling only
- ☐ Only data generation
- ☒ Data generation, denoising, inpainting, and more ✓
- ☐ Classification only
- ☐ Only denoising

The correct answer is: Data generation, denoising, inpainting, and more

### Question 3

1.00/1.00

Within generative models, what function does the discriminator serve in GANs?

- ☒ To distinguish between real and generated data ✓
- ☐ To calculate the likelihood
- ☐ To capture the joint probability
- ☐ To optimize the generator
- ☐ To generate new data

The correct answer is: To distinguish between real and generated data

### Question 4

1.00/1.00

Which model type aims to capture the joint probability  $P(x, y)$ ?



38%



- ☒ Generative Model✓
- ☐ regression model
- ☐ Both Generative Model and Discriminative Model
- ☐ Discriminative Model
- ☐ Probability Distribution

The correct answer is: Generative Model

### Question 5

1.00/1.00

Within the architecture of Generative Adversarial Networks (GANs), which duo of fundamental elements are paramount?

- ☐ Classifier and Regressor
- ☐ Activator and Deactivator
- ☒ Generator and Discriminator✓
- ☐ Forward and Backward Propagators
- ☐ Encoder and Decoder

The correct answer is: Generator and Discriminator

### Question 6

1.00/1.00

What does a probability distribution provide?

- ☐ A training method for models
- ☐ A decision boundary for classification
- ☐ A measure of model error
- ☒ A mathematical description of outcomes for a random variable✓
- ☐ A method for generating new data

The correct answer is: A mathematical description of outcomes for a random variable

### Question 7

1.00/1.00

Which claim regarding generative models isn't true?

- ☐ They capture the data distribution
- ☐ They can generate new data samples
- ☐ They can be combined with discriminative models for certain tasks
- ☒ They always require labeled data for training✓
- ☐ They can be used in unsupervised learning scenarios

The correct answer is: They always require labeled data for training

The correct answer is: They always require labeled data for training



38%



### Question 8

0.00/1.00

Which of the following is NOT a property of likelihood?

- ☐ It is always a probability between 0 and 1
- ☐ It measures how well a model explains data
- ☒ It is normalized like a probability ❌
- ☐ It can be used to compare different models
- ☐ It is a function of model parameters

The correct answer is: It is always a probability between 0 and 1

### Question 9

1.00/1.00

What's a significant hurdle when training GANs?

- ☐ Inability to generate high-resolution images
- ☐ The discriminator becoming too weak
- ☐ Slow convergence rate
- ☐ Overfitting to the training data
- ☒ Mode collapse ✓

The correct answer is: Mode collapse

### Question 10

1.00/1.00

Which of the following best describes the difference between generative and discriminative models?

- ☒ Generative models learn the data distribution, while discriminative models learn the decision boundary ✓
- ☐ Generative models are always better
- ☐ Generative models are used for classification only
- ☐ Discriminative models can't generate data
- ☐ Generative models are older in concept

The correct answer is: Generative models learn the data distribution, while discriminative models learn the decision boundary