Unit 14 - Week 11

Assignment 11

The due date for submitting this assignment has passed. **Due on 2019-10-16, 23:59 IST.**
As per our records you have not submitted this assignment.

1) Generative models learn *1 point*

- Joint probability
- Posterior probability
- Prior
- All of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
Joint probability

2) Which is/are of the following application of a generative model? *1 point*

- Generating new images, using an image to image translation.
- Generating speech from text
- Generating images with super-resolution
- All of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
All of the above

3) Let X be a continuous random variable with the following PDF: *1 point*

$$f_X(x) = \begin{cases} 2x & if\ 0 \leq x \leq 1 \\ 0 & otherwise \end{cases}$$

Also, suppose that

$$Y|X = x \sim \quad Geometric(x) \qquad (1)$$

Which of the following is the Maximum A Posteriori (MAP) estimate of X given $Y = 3$?
Note: The geometric distribution represents the number of failures before you get success in a series of Bernoulli trials. This discrete probability distribution is represented by the probability density function: $f(x) = (1-p)^{x-1}p$. If $X = n$, it means you succeeded on the $n\,th$ try and failed for n-1 tries.

- $\frac{1}{2}$
- $\frac{1}{3}$
- $\frac{1}{4}$
- $\frac{2}{3}$

No, the answer is incorrect.
Score: 0
Accepted Answers:
$\frac{1}{2}$

4) Read the following statements about Generative Adversarial Networks. Find out True statement/s: *1 point*

- Class of Generative models.
- No explicit model but allows one to sample the model distribution
- Sampling is done using a deep neural network.
- The neural network takes as input random noise and transforms it into the model distribution.

No, the answer is incorrect.
Score: 0
Accepted Answers:
Class of Generative models.
No explicit model but allows one to sample the model distribution
Sampling is done using a deep neural network.
The neural network takes as input random noise and transforms it into the model distribution.

5) What does an auto-encoder learn about the data? *1 point*

- High dimensional representation of the data
- Low dimensional representation of the data
- Average dimensional representation of the data
- No representation of the data is learned

No, the answer is incorrect.
Score: 0
Accepted Answers:
Low dimensional representation of the data

6) Auto-encoders are able to compress the input data in its hidden representation if: *1 point*

- If the input features are correlated
- If the input features are not correlated
- If the input features are independent
- If the input features are unrelated

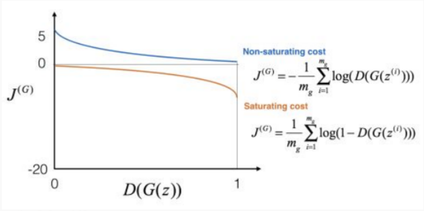
No, the answer is incorrect.
Score: 0
Accepted Answers:
If the input features are correlated

7) For any particular problem, maximizing the likelihood function always leads to *1 point*

- to excessively complex models
- Over-fitting
- Simple models
- None of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
to excessively complex models
Over-fitting

Consider the graph in Figure given below, representing the training procedure of a GAN:



The figure for question 8, 9, and 10

8) Two cost functions are presented in the figure, which one would you choose to train your GAN? *1 point*

- Non-saturating cost
- Saturating cost
- Both a and b
- None of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
Non-saturating cost

9) You know that your GAN is trained when D(G(z)) is close to 1 *1 point*

- True
- False

No, the answer is incorrect.
Score: 0
Accepted Answers:
False

10)Early in the training, is the value of D(G(z)) closer to 0 or closer to 1? *1 point*

- Closer to 0
- Closer to 1
- Closer to 0.5
- All of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
Closer to 0