Kahoot!

DL Lecture Quiz 13 (2021)

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Questions (8)

1 - Quiz

For safety-critical applications, we typically prefer a model that

30 sec

▲	is never uncertain	✗
◆	is wrong only if it is uncertain	✓
●	is uncertain only if it is wrong	✗
■	is always certain	✗

2 - Quiz

Aleatoric vs Epistemic uncertainty

20 sec

▲	Epistemic uncertainty can be reduced by collecting more data	✓
◆	Aleatoric uncertainty can be reduced by collecting more data	✗
●	Model uncertainty is Aleatoric	✗
■	Intrinsic measurement uncertainty is Epistemic	✗

3 - Quiz

The correct formula for the pdf of a univariate Gaussian is:

20 sec

△ A ✗

◆ C ✗

○ B ✓

▢ D ✗

4 - Quiz

Bayesian Linear Regression with Gaussian prior/likelihood: Which of the following is/are true?

60 sec

△ The predicted mean is equal to the Maximum Likelihood estimate (MLE) ✗

◆ The posterior distribution is Gaussian ✓

○ The predicted mean is equal to the Maximum a Posteriori (MAP) estimate ✓

▢ The posterior predictive distribution can be computed exactly/analytically. ✓

5 - Quiz

ELBO: Which of the following terms can be computed exactly (given an appropriate choice of prior and q)

30 sec

△ (a) ✗

◆ (c) ✓

○ (b) ✓

▢ (d) ✗

6 - Quiz

When using ...... uncertainty estimates are based on predictions made by models sampled from the posterior distribution.

20 sec

🔺 DNGO ✗

🔷 Ensembles (e.g. of NNs trained from different initializations) ✗

🟡 MCMC ✓

🟩 Variational Inference ✗

7 - Quiz

Which of the following best describes the idea underlying PFNs

30 sec

🔺 Only model uncertainty in the final layer to keep the posterior tractable ✗

🔷 Approximate an intractable posterior by a simpler distribution ✗

🟡 Learn to directly predict the posterior predictive distribution. ✓

🟩 Sample from the posterior instead of calculating it exactly ✗

8 - Quiz

Prior-fitted Networks (PFNs) ...

30 sec

🔺 are trained on a prior over datasets ✓

🔷 predict the posterior distribution ✗

🟡 are trained on a prior over parameters of the neural network ✗

🟩 predict the posterior predictive distribution ✓