

Quiz 9

⚠ This is a preview of the published version of the quiz

Started: Jun 22 at 9:13pm

Quiz Instructions



Question 1 1 pts

In Bayesian inference, what is a prior distribution of an unknown parameter?

☐

It is the sampling distribution of a point estimate of the unknown parameter.

☐

It is the empirical distribution of the observed data.

☐

It is the population distribution of the observed data.

☐

It is a probability distribution to represent our prior knowledge of the uncertainty about the unknown parameter.



Question 2 1 pts

Which of the following is NOT true comparing Frequentist vs. Bayesian Statistics?

☐

Frequentist and Bayesian methods solve completely different problems in statistics.

☐

Unknown parameters is treated as a random variable in Bayesian inference.

☐ Unknown parameters is treated as a deterministic constant in frequentist inference.

☐ Both Frequentist and Bayesian use likelihood function.



Question 3 1 pts

What is the theoretical foundation of combining prior distribution and likelihood function to derive the posterior distribution?

☐ The Bayes Theorem.

☐ Law of Large Numbers.

☐ Glivenko–Cantelli Theorem

☐ The Central Limit Theorem.



Question 4 1 pts

What can we get when we can analytically derive the posterior distribution of the unknown parameter?

☐ All of them!

☐ An interval estimate of the unknown parameter.

☐ A point estimate of the unknown parameter.

☐ Quantified uncertainty with probabilistic guarantee.



Question 5 1 pts

Which of the prior distribution and likelihood model is conjugate?

☐

Uniform[0, 1] prior with Binomial likelihood.

☐

Exponential prior with Poisson likelihood.

☐

Beta prior with Binomial likelihood.

☐

All of them.

Not saved

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