Module Learning Objectives

LO 1. Identify the difference between a discrete and continuous random variable and define their corresponding probability functions.

LO 2. Elicit prior beliefs about a parameter in terms of a Beta, Gamma, or Normal distribution.

LO 3. Understand the concept of conjugacy and know the Beta-Binomial, Poisson-Gamma, and Normal-Normal conjugate families.

LO 4. Make inferences about a proportion using a conjugate Beta prior.

LO 5. Make inferences about a rate of arrival using a conjugate Gamma prior.

LO 6. Make inferences about the mean of a normal distribution when the variance is known.

LO 7. Articulate the differences between a Frequentist confidence interval and a Bayesian credible interval.

LO 8. Derive the posterior predictive distribution for very simple experiments.

LO 9. Define the concepts of prior, likelihood, and posterior probability and identify how they relate to one another.

Mark as completed