* Define the Bayesian interpretation of probability.
* >>>The Bayesian interpretation of probability views probability as a measure of our uncertainty about a particular event, given the available information or evidence. It combines prior beliefs with new evidence to update our probability estimates.
* Define probability of a union of two events with equation.
* >>>
* What is joint probability? What is its formula?
* >>>Joint probability refers to the probability of two or more events occurring simultaneously. It's denoted as
* P(A∩B), where A and B are events. The joint probability represents the likelihood of both events A and B happening together.
* Joint probability refers to the probability of two or more events occurring simultaneously.
* What is chain rule of probability?
* >>>he chain rule of probability allows us to express the joint probability of multiple events in terms of conditional probabilities. For two events A and B:
* What is conditional probability means? What is the formula of it?
* >>>Conditional probability is the probability of one event happening given that another event has already occurred
* What are continuous random variables?
* >>>Continuous random variables take on an uncountable range of possible values within a specified interval. They are often associated with measurements or quantities, like height, weight, time, etc.
* What are Bernoulli distributions? What is the formula of it?
* >>>The Bernoulli distribution models a binary outcome, where an event can have only two possible outcomes (e.g., success/failure, heads/tails). It's defined by a single parameter
* p, which represents the probability of success.
* >>>The binomial distribution describes the number of successes in a fixed number of independent Bernoulli trials. It's characterized by two parameters: the number of trials
* n and the probability of success
* p.
* What is binomial distribution? What is the formula?
* >>>
* What is Poisson distribution? What is the formula?
* >>>The Poisson distribution models the number of events occurring in a fixed interval of time or space when the events occur with a known average rate
* Define covariance.
* >>>Covariance is a statistical measure that describes the relationship between two random variables. Positive covariance indicates that the variables tend to increase together, negative covariance indicates that one variable tends to increase as the other decreases, and zero covariance indicates no linear relationship.
* Define correlation
* >>>Correlation is a standardized measure of the strength and direction of the linear relationship between two variables. It ranges from -1 (perfect negative correlation) to 1 (perfect positive correlation), with 0 indicating no linear correlation.
* Define sampling with replacement. Give example.
* >>>Sampling with replacement means that after each selection from a sample, the selected item is returned before the next selection.
* What is sampling without replacement? Give example.
* >>>Sampling without replacement means that once an item is selected from a sample, it's not returned before the next selection.
* What is hypothesis? Give example.
* >>>A hypothesis is a statement or assumption that is tested through observation and experimentation