

**Abstract:**

In this paper, we will deal with the Poisson distribution. The Poisson distribution is very important in statistics and probabilities, and it is a probability distribution that expresses the probability of a number of events occurring within a specified period of time if these events occur at a known average rate and is not related to the time of the last event. We will also study the basic properties of the distribution and statistical examples of this distribution. Finally, represents some Examples of probability for Poisson distributions.