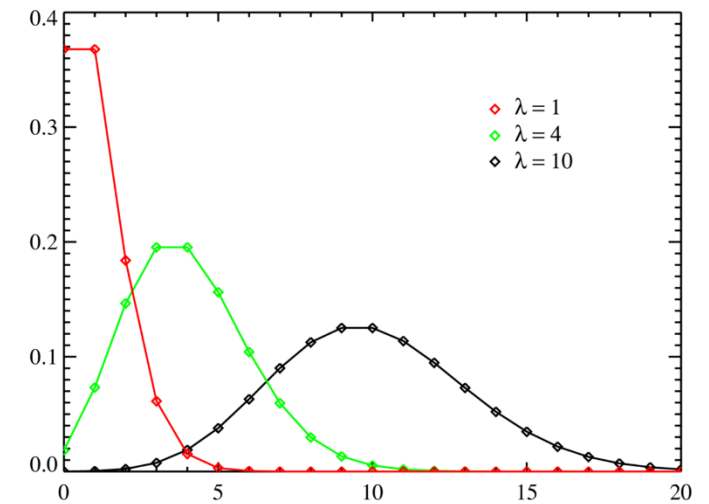


Siddhardhan

Poisson Distribution

Math for Machine Learning



Poisson Distribution

Poisson Distribution is a probability distribution that measures how many times an event is likely to occur within a specified period of time.

Poisson distribution is used to understand independent events that occur at a constant rate within a given interval of time.

Examples of Poisson Distribution

- Number of accidents occurring in a city from 6 pm to 10 pm
- Number of Patients arriving in an Emergency Room between 10 pm to 12 pm
- How many views does your blog gets in a day

Poisson Distribution

$$p(x) = \frac{e^{-\lambda} \lambda^x}{x!}$$

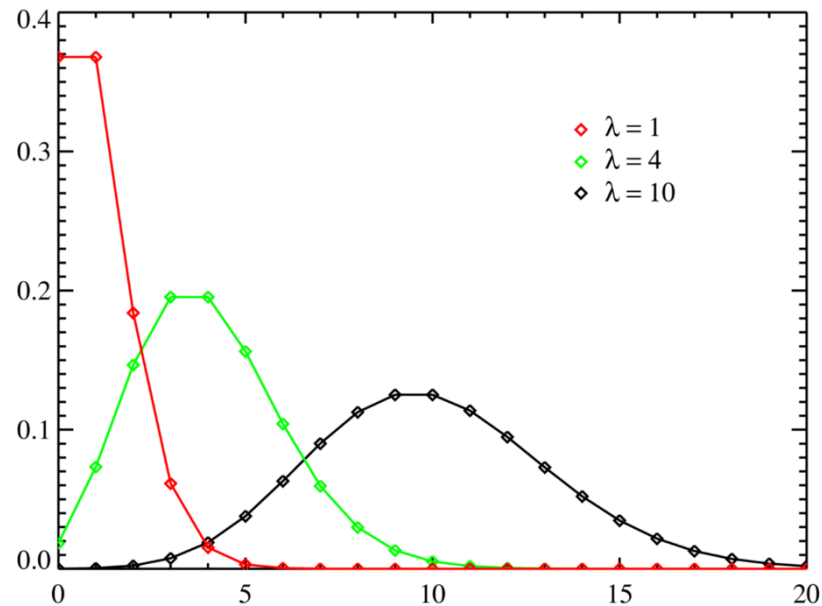
x --> Number of times
the event occurs

p(x) --> Probability

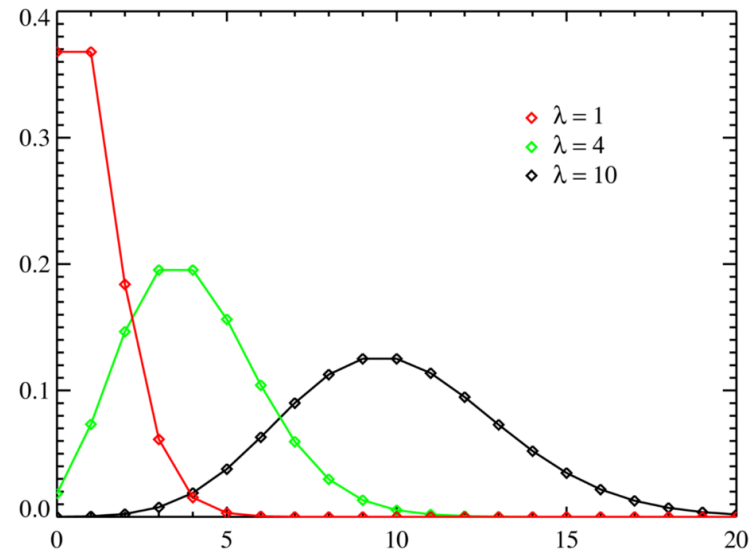
λ --> Mean number of events

x! --> Factorial of x

e --> Euler's Number (2.71828)



Poisson Distribution



**Data
Science**