

Machine Learning Notes

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Series One

Statistics

Maximum likelihood estimation is an important statistical approach to estimate parameters. Here is one example of deriving the mean and variance of the data forming Gaussian Distribution. This problem was tested:

The probability density function (pdf) for a 1-d Gaussian Distribution is as follows:

$$f(x|\mu, \sigma) = \frac{1}{\sigma\sqrt{2\pi}} e^{-(x-\mu)^2/2\sigma^2} \quad (1)$$