Probability Density Functions and Cummulative Distribution Functions

Study Development Quick Guide

## Probability density functions

A probaility density function (pdf) of a continuous random variable is a function that describes relative likelihood. We use pdfs to find the probability that a random variable will lie between two values.

The important points for pdfs are as follows:

* For a pdf .
* for all .
* .
* Since we have that

## Cummulative distribution functions

The cummulative distribution function (cdf) is a function that gives the probability that a random variable will take a value less than when the cdf is evaluated at .

We find a cdf () by calculating:

Thus, we can also find the pdf from the cdf by calculating

The cdf gives us

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