

distribs Reference Manual

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Contents

1	distribs File Index	1
1.1	distribs File List	1
2	distribs File Documentation	3
2.1	distribs.h File Reference	3

Chapter 1

distribs File Index

1.1 distribs File List

Here is a list of all documented files with brief descriptions:

distribs.h	3
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Chapter 2

distribs File Documentation

2.1 `distribs.h` File Reference

Functions

- long **distribs_get_seed** (void)
- void **distribs_set_seed** (long seed)
- double **distribs_unif** (void)
- double **distribs_uniform** (double initial, double final)
- double **distribs_expon** (void)
- double **distribs_exponential** (double lambda)
- double **gauss** (void)
- double **distribs_gaussian** (double mean, double var)
- double **distribs_salfas1** (double alfa)
- double **distribs_SalfaS** (double alpha, double sigma, double mu)
- double **distribs_stable** (double alfa, double sigma, double beta, double mu)
- double **distribs_pareto** (double K, double alfa)
- double **distribs_randFDP** (double *dist, int numpoints)
- double **distribs_weibull** (double alpha, double beta)

2.1.1 Detailed Description

2.1.2 Function Documentation

2.1.2.1 `double distribs_expon (void)`

Returns an exponentially distributed random value with $\lambda = 1$

2.1.2.2 `double distribs_exponential (double lambda)`

Returns an exponentially distributed random value with parameter λ

2.1.2.3 double distribs_gaussian (double *mean*, double *var*)

Returns a gaussian distributed random value with average = mean and variance = var, hence $N(\text{mean}, \sqrt{\text{var}})$

2.1.2.4 long distribs_get_seed (void)

It returns the seed used for the random numbers. If it is the first function we call from the library it sets a new random seed

2.1.2.5 double distribs_pareto (double *K*, double *alfa*)

Returns a Pareto distributed random value with parameters K and alpha

2.1.2.6 double distribs_randFDP (double **dist*, int *numpoints*)

Returns a random value from a distribution described with its probability distribution function (argument "dist") "dist" must be an array of couples of doubles (x,y), being points in the probability distribution "numpoints" is the number of couples in the array "dist"

2.1.2.7 double distribs_SalfaS (double *alpha*, double *sigma*, double *mu*)

Returns an alpha-stable distributed random value with alpha, sigma, mu and beta=0, hence $S(1,0,0)$

2.1.2.8 double distribs_salfas1 (double *alfa*)

Returns an alpha-stable distributed random value with alpha=1, sigma=0, mu=0, hence $S(1,0,0)$

2.1.2.9 void distribs_set_seed (long *seed*)

Set a new seed

2.1.2.10 double distribs_stable (double *alfa*, double *sigma*, double *beta*, double *mu*)

Returns an alpha-stable distributed random value with alpha, sigma, mu and beta

2.1.2.11 double distribs_unif (void)

Returns a uniform random value in $[0,1)$

2.1.2.12 double distribs_uniform (double *initial*, double *final*)

Returns a uniform random value in $[\text{initial}, \text{final})$

2.1.2.13 double distribs_weibull (double *alpha*, double *beta*)

Returns a Weibull distributed random value with parameters alpha and beta

2.1.2.14 double gauss (void)

Returns a gaussian distributed random value with average 0 and standard deviation = 1, hence $N(0,1)$

Index

- distribs.h, 3
 - distribs_expon, 3
 - distribs_exponential, 3
 - distribs_gaussian, 3
 - distribs_get_seed, 4
 - distribs_pareto, 4
 - distribs_randFDP, 4
 - distribs_SalfaS, 4
 - distribs_salfas1, 4
 - distribs_set_seed, 4
 - distribs_stable, 4
 - distribs_unif, 4
 - distribs_uniform, 4
 - distribs_weibull, 4
 - gauss, 4
- distribs_expon
 - distribs.h, 3
- distribs_exponential
 - distribs.h, 3
- distribs_gaussian
 - distribs.h, 3
- distribs_get_seed
 - distribs.h, 4
- distribs_pareto
 - distribs.h, 4
- distribs_randFDP
 - distribs.h, 4
- distribs_SalfaS
 - distribs.h, 4
- distribs_salfas1
 - distribs.h, 4
- distribs_set_seed
 - distribs.h, 4
- distribs_stable
 - distribs.h, 4
- distribs_unif
 - distribs.h, 4
- distribs_uniform
 - distribs.h, 4
- distribs_weibull
 - distribs.h, 4
- gauss
 - distribs.h, 4