

Statistics – The Standard Normal Distribution



Standard Normal
Distribution

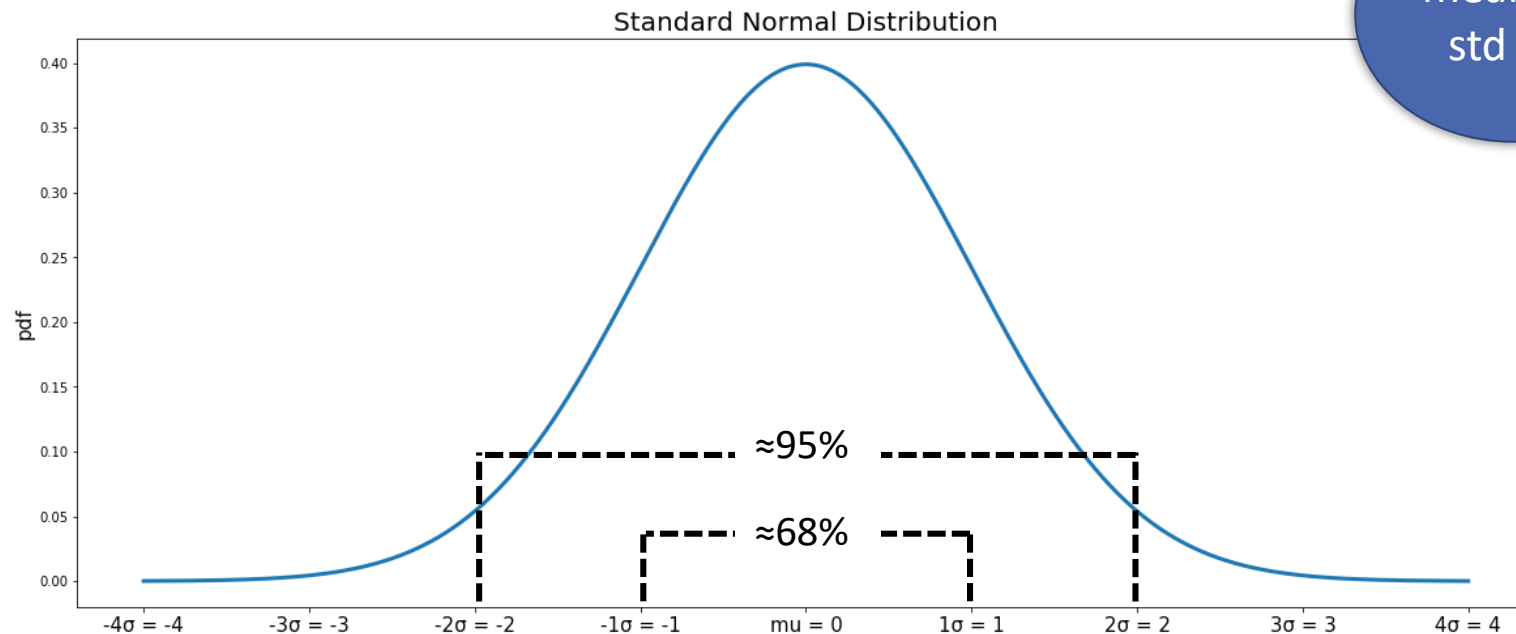
What is the difference to the
Normal Distribution?

Standard Normal Distribution - Properties

Properties

- completely described by **mean** and **standard deviation** / variance
- **symmetrical** around the mean \rightarrow **Skew** = 0
- **Kurtosis** = 3 / Excess Kurtosis = 0

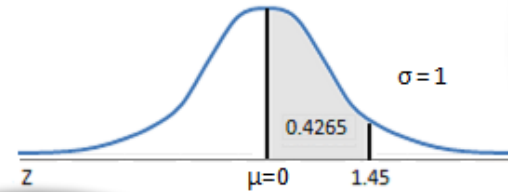
mean = 0
std = 1



Standard Normal Distribution – Z-Table

Areas Under the One-Tailed Standard Normal Curve

This table provides the area between the mean and some Z score.
For example, when Z score = 1.45 the area = 0.4265.



Z	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.0	0.0000	0.0040	0.0080	0.0120	0.0160	0.0199	0.0239	0.0279	0.0319	0.0359
0.1	0.0398	0.0438	0.0478	0.0518	0.0558	0.0598	0.0639	0.0675	0.0714	0.0753
0.2	0.0793	0.0832	0.0872	0.0911	0.0950	0.0989	0.1028	0.1064	0.1103	0.1141
0.3	0.1179	0.1217	0.1255	0.1293	0.1331	0.1368	0.1406	0.1443	0.1480	0.1517
0.4	0.1554	0.1591	0.1628	0.1665	0.1700	0.1736	0.1772	0.1808	0.1844	0.1879
0.5	0.1915	0.1950	0.1985	0.2019	0.2054	0.2088	0.2122	0.2157	0.2190	0.2224
0.6	0.2257	0.2291	0.2324	0.2357	0.2389	0.2422	0.2454	0.2486	0.2517	0.2549
0.7	0.2580	0.2611	0.2642	0.2673	0.2703	0.2734	0.2764	0.2794	0.2823	0.2852
0.8	0.2881	0.2910	0.2939	0.2967	0.2995	0.3023	0.3051	0.3079	0.3106	0.3133
0.9	0.3159	0.3186	0.3212	0.3238	0.3264	0.3289	0.3315	0.3341	0.3365	0.3389
1.0	0.3413	0.3438	0.3461	0.3485	0.3508	0.3529	0.3550	0.3569	0.3588	0.3606
1.1	0.3625	0.3643	0.3661	0.3679	0.3695	0.3712	0.3729	0.3745	0.3770	0.3786
1.2	0.3809	0.3825	0.3841	0.3857	0.3872	0.3888	0.3903	0.3917	0.3931	0.3945
1.3	0.3959	0.3972	0.3985	0.3998	0.4010	0.4022	0.4033	0.4044	0.4054	0.4064
1.4	0.4074	0.4084	0.4093	0.4102	0.4111	0.4119	0.4127	0.4135	0.4143	0.4151
1.5	0.4158	0.4166	0.4174	0.4181	0.4188	0.4195	0.4202	0.4209	0.4215	0.4221
1.6	0.4227	0.4232	0.4237	0.4242	0.4247	0.4251	0.4256	0.4261	0.4265	0.4269
1.7	0.4272	0.4276	0.4279	0.4282	0.4285	0.4288	0.4291	0.4294	0.4297	0.4299
1.8	0.4302	0.4304	0.4306	0.4308	0.4310	0.4311	0.4313	0.4314	0.4315	0.4316
1.9	0.4317	0.4318	0.4319	0.4320	0.4321	0.4321	0.4322	0.4322	0.4323	0.4323
2.0	0.4324	0.4324	0.4324	0.4324	0.4324	0.4324	0.4324	0.4324	0.4324	0.4324

