Distribuciones Continuas

Nombre		Densidad	Parámetros	Media	Varianza	Generadora de momentos
Uniforme o Rectangular	$U(\theta_1,\theta_2)$	$f(x;\ \theta_1,\ \theta_2\ ) = \dfrac{1}{\theta_2-\theta_1} I_{[\theta_1,\theta_2]}(x)$	$-\infty<\theta_1<\ \theta_2 <\infty$	$\dfrac{\theta_1+\theta_2}{2}$	$\dfrac{(\theta_2-\theta_1)^2}{12}$	$\dfrac{e^{\theta_2 t}-e^{\theta_1 t}}{(\theta_2-\theta_1)t}$
Exponencial	$Exp(\theta)$	$f(x;\ \theta\ )=\ \theta e^{-\theta x} I_{(0,\infty)}(\ x\ )$	$\theta\ >0$	$\dfrac{1}{\theta}$	$\dfrac{1}{\theta^2}$	$\dfrac{\theta}{\theta-t},\ t<\theta$
Normal	$N(\theta,\ \sigma^2)$	$f(x;\ \theta,\ \sigma)=$ $\dfrac{1}{\sqrt{2\pi\sigma^2}} e^{-\frac{1}{2\sigma^2}(x-\theta)^2} I_{(-\infty,\infty)}(x)$	$-\infty<\ \theta<\infty$ $\sigma>0$	θ	σ^2	$e^{\theta t+\frac{1}{2}\sigma^2 t^2}$
Gamma	$Gam(r,\theta)$	$f(x;\ r,\ \theta\ )=\ \dfrac{\theta^r x^{r-1}e^{-\theta x}}{\Gamma(r)} I_{(0,\infty)}(x)$	$\theta>0$ $r\ >0$	$\dfrac{r}{\theta}$	$\dfrac{r}{\theta^2}$	$\left(\dfrac{\theta}{\theta-t}\right)^r,\ t<\theta$
Cauchy	$C(\alpha,\beta)$	$f(x;\ \alpha,\beta\ )=$ $\dfrac{1}{\pi\beta\left(1+\left(\dfrac{x-\alpha}{\beta}\right)^2\right)} I_{(-\infty,\infty)}(x)$	$-\infty<\ \alpha<\infty$ $\beta>0$	No existe	No existe	$e^{i\alpha t-\beta\|t\|}$ (f.c)
Chi cuadrada	χ^2_k	$f(x;k)=\dfrac{1}{\Gamma\left(\frac{k}{2}\right)}\left(\dfrac{1}{2}\right)^{\frac{k}{2}} x^{\frac{k}{2}-1} e^{-\frac{1}{2}x} I_{(0,\infty)}(x)$	$k=1,2\ldots$	k	$2k$	$\left(\dfrac{1}{1-2t}\right)^{\frac{k}{2}}$ para $t<½$
Weibull	W(a,b)	$f(x;a,b)=abx^{b-1}e^{-ax^b} I_{(0,\infty)}(x)$	$a>0$ $b>0$	$a^{-\frac{1}{b}}\Gamma\left(1+b^{-1}\right)$	$a^{-\frac{2}{b}}\left[\Gamma\left(1+2b^{-1}\right)-\Gamma^2\left(1+2b^{-1}\right)\right]$	E[X^t]= $a^{-\frac{t}{b}}\Gamma\left(1+\dfrac{t}{b}\right)$

Pareto	P(θ, x_0)	$f(x;\theta,x_0)=\frac{\theta x_0^{\theta}}{x^{\theta+1}}I_{(x_0,\infty)}(x)$	$x_0>0$ $\theta>0$	$\frac{\theta x_0}{\theta-1}$ para $\theta>1$	$\frac{\theta x_0^2}{(\theta-1)^2(\theta-2)}$ para $\theta>2$	No existe
Lognormal	LnN((θ, σ^2)	$f(x;\ \theta,\ \sigma^2)=$ $\frac{1}{x\sqrt{2\pi\sigma^2}}e^{-\frac{1}{2\sigma^2}(\ln x-\theta)^2}I_{(0,\infty)}(x)$	$-\infty<\theta<\infty$ $\sigma>0$	$e^{\left(\theta+\frac{1}{2}\sigma^2\right)}$	$e^{\left(2\theta+2\sigma^2\right)}-e^{\left(2\theta+\sigma^2\right)}$	No útil