Variable	sucesos	Modelo	Función de probabilidad o densidad	Función acumulativa o de distribución	Esperanza	Varianza	Parámetros
Disc.	Única obs.	Bernoulli	$f(x)=\left\langle \begin{array}{l} p,\forall x=1 \\ 1-p,\forall x=0 \end{array}\right.$		$E(x)=p$	$Var(x)=p.q$	p $q=1-p$
Disc.	Indep.	Binomial	$f(X=x)=\frac{n!}{x!(n-x)!}p^{x}(1-p)^{n-x}$	$F(x)=\sum_{\forall x_i \le x} f(x_i)$	$E(x)=n.p$	$Var(x)=n.p.q$	n p
Disc.	Indep.	Geométrico	$P(N=n)=f(n)=(1-p)^{n-1}p$	$F(x)=1-(1-p)^{n}$	$E(x)=\frac{1}{p}$	$Var(x)=\frac{1-p}{p^2}$	n p
Disc.	Indep.	Poisson	$P(X=x)=f(x)=\frac{e^{-\lambda}\lambda^{x}}{x!}$		$E(x)=\lambda=n.p$	$Var(x)=\lambda=n.p$	$\lambda=n.p$
Disc.	Dep.	Hipergeométrico	$P(X=x)=f(x)=\frac{\binom{k}{x}\binom{N-k}{n-x}}{\binom{N}{n}}$		$E(x)=N\left(\frac{k}{n}\right)$	$Var(x)=\frac{nk(N-k)}{N^2}\left(\frac{N-n}{N-1}\right)$	k N n
Cont.	Indep.	Exponencial	$f(t)=\lambda e^{-\lambda t}$	$F(t)=1-e^{-\lambda t}$	$E(T)=\frac{1}{\lambda}$	$Var(T)=\frac{1}{\lambda^2}$	$\lambda=n.p$ t
Cont.		Gamma	$f(x)=\frac{\lambda(\lambda x)^{k-1}e^{-\lambda x}}{(k-1)!}$	$F(x)=\int_0^x f(t)dt=\frac{\Gamma(k,\lambda x)}{\Gamma(k)}=\frac{función\ gamma\ incompleta}{función\ gamma}$	$E(x)=\frac{k}{\lambda}$	$Var(x)=\frac{k}{\lambda^2}$	$\lambda=n.p$ k
Cont.		Normal	$f(x)=\frac{1}{\sigma\sqrt{2\pi}}e^{-\frac{1}{2}\left(\frac{x-\mu}{\sigma}\right)^2}$	$F(x)=\frac{1}{\sigma\sqrt{2\pi}}\int_{-\infty}^{x}e^{-\frac{1}{2}\left(\frac{t-\mu}{\sigma}\right)^2}dt$	$E(x)=\mu$	$Var(x)=\sigma^2$	μ σ
Cont.		Normal estándar	$f(z)=\frac{1}{\sigma\sqrt{2\pi}}e^{-\frac{1}{2}z^2}$	$F(x)=\frac{1}{\sigma\sqrt{2\pi}}\int_{-\infty}^{z}e^{-\frac{1}{2}t^2}dt$	$E(z)=0$	$Var(z)=1$	$z=\frac{x-\mu}{\sigma}$ $\mu=0$ $\sigma=1$
Cont.		Chi-cuadrado	$f(\chi^2)=\begin{cases} \frac{1}{2^{\frac{\upsilon}{2}}\Gamma\left(\frac{\upsilon}{2}\right)}\chi^{2\left(\frac{\upsilon-2}{2}\right)e^{-\frac{\chi^2}{2}}},\ para\ \chi^2>0 \\ 0,\ en\ otro\ caso \end{cases}$	$V=\sum_{i=1}^{\upsilon}\left(\frac{X_i-\mu_i}{\sigma_i}\right)^2 \square\ \chi_{\upsilon}^2$	$E(\chi^2)=\upsilon$	$Var(\chi^2)=2\upsilon$	υ χ^2

Cont.		T de Student	$f(t)=\frac{1}{\sqrt{\pi\upsilon}}\frac{\Gamma\left(\frac{\upsilon+1}{2}\right)}{\Gamma\left(\frac{\upsilon}{2}\right)}\left(1+\frac{t^2}{\upsilon}\right)^{-\frac{1}{2}z^2}$ Con $t_\upsilon=\frac{x}{\sqrt{\frac{V}{\upsilon}}}\begin{cases} x \sim N(0,1) \\ V \sim \chi_\upsilon^2 \end{cases}$		$E(t)=0$	$Var(t)=\frac{\upsilon}{\upsilon-2},\ \upsilon>2$	υ x V
Cont.		F de Snedecor	$f(F)=\frac{\Gamma\left(\frac{\upsilon_1+\upsilon_2}{2}\right)\upsilon_1^{\frac{\upsilon_1}{2}}\upsilon_2^{\frac{\upsilon_2}{2}}F^{\frac{\upsilon_1}{2}-1}}{\Gamma\left(\frac{\upsilon_1}{2}\right)\Gamma\left(\frac{\upsilon_2}{2}\right)\left(\upsilon_2+\upsilon_1F\right)^{\frac{\upsilon_1+\upsilon_2}{2}}},\ \ para\ F>0$	$F_{\upsilon_1,\upsilon_2}=\frac{\frac{\chi_1^2}{\upsilon_1}}{\frac{\chi_2^2}{\upsilon_2}}$			
Cont.		Log-Normal	$f(x)=\frac{1}{x\sigma_y\sqrt{2\pi}}e^{-\frac{1}{2}\left(\frac{\ln x-\mu_y}{\sigma_y}\right)^2},\ x\geq 0$		$E(x)=e^{\left(\mu_y+\frac{\sigma_y^2}{2}\right)}$	$Var(x)=\mu_x^2\left(e^{\sigma_y^2-1}\right)$	μ_x μ_y σ_y
Cont.	Indep.	Gumbel	$f(x)=\alpha e^{-\alpha(x-\mu_0)-e^{-\alpha(x-\mu_0)}}$	$F(x)=e^{-e^{-\alpha(x-\mu_0)}},\ -\infty\leq x\leq+\infty$	$E(x)=\mu=\mu_0+\frac{0.577}{\alpha}$	$Var(x)=\sigma^2=\frac{1.645}{\alpha^2}$	α $\mu_0=x$
Cont.	Indep.	Weibull	$f(z)=\frac{k}{\mu_0-\varepsilon}\left(\frac{z-\varepsilon}{\mu_0-\varepsilon}\right)^{k-1}e^{-\left(\frac{z-\varepsilon}{\mu_0-\varepsilon}\right)^k}$	$F(z)=1-e^{-\left(\frac{z-\varepsilon}{\mu_0-\varepsilon}\right)^k}$	$E(x)=\mu=\varepsilon+\left(\mu_0-\varepsilon\right)\Gamma\left(1+\frac{1}{k}\right)$	$Var(x)=\sigma^2=\left(\mu_0-\varepsilon\right)^2\left[\Gamma\left(1+\frac{2}{k}\right)-\Gamma^2\left(1+\frac{1}{k}\right)\right]$	