

Random Variables

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Probability Distributions

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$$Pr(t) : T \rightarrow R$$

Discrete Probability Distribution

Bernoulli distribution, binomial distribution, Poisson distribution, and geometric distribution.

Binomial distribution

- The number of successes in a fixed number of independent trials:

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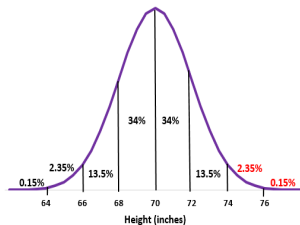
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- $E(x) = np$

Continuous Probability Distribution

Uniform distribution, normal (Gaussian) distribution, exponential distribution, and beta distribution.

Gaussian distribution



$$Pr(t) = \frac{1}{\sigma\sqrt{2\pi}} \exp^{-\frac{1}{2}\left(\frac{t-\mu}{\sigma}\right)^2}$$

Q & A