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χ^2 distributions

[[allowframebreaks]Introduction

This material comes primarily from [[Chapter 6]rice07.

Here, we introduce several important distributions that arise from transformations applied to normal distributions.

Many of these distributions form the basis of traditional statistical inference procedures that are taught in introductory

They are very useful in practice due to the central limit theorem: with enough observations, the limiting behavior of ne

[[allowframebreaks] χ^2_ν Distribution

The first distribution we will consider is the χ^2_1 (Chi-square with 1 degree of freedom).

Definition: χ^2_1 distribution If Z is a standard normal random variable, then $X = Z^2$ is called the chi-square distribution

We typically use the notation $X \sim \chi^2_1$ (in LaTeX:

chi)

presentation; [[allowframebreaks=0.8]References and Acknowledgements

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