

## ESTIMAÇÃO DE DIFERENÇAS ENTRE DUAS PROPORÇÕES BINOMIAIS VIA BOOTSTRAP

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- **ABSTRACT:** *Constructing a confidence interval for the difference of two binomial proportions is frequently used in statistical inference. This work aimed to propose a method for constructing confidence intervals for the difference of two binomial proportions using parametric bootstrap. It was used Monte Carlo simulation to generate data from binomial distribution in different combinations of sample sizes, significance nominal levels and proportions. The results were compared with the results of other four existent confidence intervals methods for difference among two binomial proportions: Wald, add-4, T2 and Conlon and Thomas (1990) methods. It were used as comparison criterions the coverage probability and the average width of the confidence interval. The proposed method presents appropriate results, except for the situation of small samples that it has a superior average width than the other methods. The T2 method has coverage probability equal or superior to the nominal level and has average width smaller than the bootstrap-add-4 method. The add-4 method is preferable for presenting appropriate results for the coverage probabilities and smaller intervals average width. The Wald method has smaller coverage probabilities than the nominal confidence coefficient compromising its practical recommendation.*
- **KEYWORDS:** *Binomial; bootstrap; Monte Carlo; coverage probability; Wald.*

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