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References

Hesterberg: What teachers should know about the bootstrap: Resampling in the undergraduate statistics curriculum Hesterberg-2014

Tim C. Hesterberg. *What teachers should know about the bootstrap: Resampling in the undergraduate statistics curriculum*. 2014. arXiv: [1411.5279 \[stat.OT\]](https://arxiv.org/abs/1411.5279). URL: <https://arxiv.org/abs/1411.5279>.

Abstract: I have three goals in this article:

1. To show the enormous potential of bootstrapping and permutation tests to help students understand statistical concepts including sampling distributions, standard errors, bias, confidence intervals, null distributions, and P-values.
2. To dig deeper, understand why these methods work and when they don't, things to watch out for, and how to deal with these issues when teaching.
3. To change statistical practice—by comparing these methods to common t tests and intervals, we see how inaccurate the latter are; we confirm this with asymptotics. $n \geq 30$ isn't enough—think $n \geq 5000$.

Resampling provides diagnostics, and more accurate alternatives. Sadly, the common bootstrap percentile interval badly under-covers in small samples; there are better alternatives. The tone is informal, with a few stories and jokes.

Jeff A. Jones and Niels G. Waller. *The normal-theory and asymptotic distribution-free (ADF) covariance matrix of standardized regression coefficients: Theoretical extensions and finite sample behavior*. Tech. rep. University of Minnesota-Twin Cities, May 25, 2013. URL: <http://users.cla.umn.edu/~nwaller/downloads/techreports/TR052913.pdf> (visited on 07/22/2022).

Abstract: Yuan and Chan (2011) recently showed how to compute the covariance matrix of standardized regression coefficients from covariances. In this paper, we describe a new method for computing this covariance matrix from correlations. We then show that Yuan and Chan's original equations can also be used when only correlational data are available. Next, we describe an asymptotic distribution-free (ADF; Browne, 1984) method for computing the covariance matrix of standardized regression coefficients. We show that the ADF method works well with non-normal data in moderate-to-large samples using both simulated and real-data examples. Finally, we provide R code (R Development Core Team, 2012) in an Appendix to make these methods accessible to applied researchers.

Linda K. Muthén and Bengt O. Muthén. *Mplus user's guide. Eighth edition*. Los Angeles, CA: Muthén & Muthén, 2017.