transform_mos

Implementation of MOS-transformation to be used with Rank based statistical techniques.

Description

The rank correlation coefficients and the ranked-based statistical tests (as a subset of non-parametric techniques) might be misleading when they are applied to subjectively collected opinion scores. Those techniques assume that the data is measured at least at an ordinal level and define a sequence of scores to represent a tied rank when they have precisely an equal numeric value. Before applying any rank based static technique use this package to transfer MOS values to a new rank so the result of statistic techniques will be robust to noises.

Usage

transform_mos(mos, ci)

Arguments

mos array of MOS values
ci array of 95% Confidence Intervals.

Details

See the paper for details:


There, we show that the definition of tied rank, as mentioned above, is not suitable for Mean Opinion Scores (MOS) and might be misleading conclusions of rank-based statistical techniques. Furthermore, we introduce a method to overcome this issue by transforming the MOS values considering their 95% Confidence Intervals. The rank correlation coefficients and ranked-based statistical tests can then be safely applied to the transformed values. This is the R implementation of the transformation method.

Value

New rank values. Use the outcome with rank based statistical techniques e.g. Spearman’s Rank correlation.

Author(s)

Dr. Babak Naderi <bnaderi9@gmail.com>
References


website: https://github.com/babaknaderi/MOS-transformation

Examples

```r
mos <- c(1.1, 4, 5, 2, 3, 1.2, 4)
ci <- c(0.1, 0.1, 0.1, 0.1, 0.1, 0.1, 0.1)
transform_mos(mos, ci)
```
Index

* MOS
  transform_mos, 2
* Rank Statistic
  transform_mos, 2
* Spearman Correlation
  transform_mos, 2
* subjective test
  transform_mos, 2