Discuit – a tool for dividing items into equal sets

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In psycho- and neurolinguistic research, items often need to be partitioned into a specified number of subsets that are as comparable as possible regarding multiple variables. This enables a reliable comparison between experimental conditions. With Discuit (De Kok, 2023), we created a tool that can do this task automatically, using clustering algorithms. The tool takes a spreadsheet as input and generates the required number of sets, matched on the provided data. These data can be categorical (e.g. 'word class') and/or continuous (e.g. 'word frequency'). Finally, one variable can be marked as "primary". The items will be split perfectly even with regard to this variable (e.g. 'accuracy in pre-treatment assessment').

We have piloted the tool in a recent aphasia treatment study to split the diagnostic items into to-be-trained and not-to-be-trained items for each of the two participants. In this presentation or poster, I will explain the underlying mechanism of the tool, illustrate how it can be used for different purposes and discuss our pilot study as an example use case.

De Kok, D. (2023). Discuit (Version 0.1.0) [Computer software]. Zenodo. https://doi.org/10.5281/zenodo.7671857