**Preliminary information**

Focus on the app about Confirmatory Factor Analysis which you can find here:

https://statsomat.shinyapps.io/confirmatory-factor-analysis/.

This app is in development! Ca. 50% of the planned functionalities are still to be developed. We already need testing cases based on literature. A testing case is made of:

* a testing dataset with measured variables (CSV file)
* a model syntax in lavaan syntax (saves as a TXT)
* details and possibly an interpretation from a book or URL (saved as TXT, PDF etc.)

Only the option “generate report without code” is currently working!

Please mention the number of variables and the factors in the name of the folder for a case.

**Jobs**

1. Understanding: Inspect the CFA app by using the available testing cases (datasets, model syntax and interpretation). Understand the functionality of the app. Understand the output tables of the app. Understand the statistical interpretation delivered by the app. Compare it to the available sources (book or URL).
2. Create testing cases for CFA from the book:

<http://sites.bu.edu/tabrown/cfabook/>

(You have the book also as a kindle e-book)

1. Create testing cases for CFA from the book:

<https://www.guilford.com/companion-site/Principles-and-Practice-of-Structural-Equation-Modeling-Fourth-Edition/9781462523344/files>

1. Create testing cases for CFA from the internet
2. Simulate datasets for testing cases (given covariance or correlation matrices plus mean vectors). Simulate the number of observations shown in the book. Try this link:
   1. <https://www.r-bloggers.com/simulating-random-multivariate-correlated-data-continuous-variables/>
3. Test the app by using the Tests\_app3.xlsx file. Compare the output of the app with the output from the bool and make your comments. Mark with green/yellow/red (similar to the app2). Each case should have its own Github issue for discussions – please create the issues if not available.