Statistik BME – Summer Semester 2022

Main Literature: M. Kohl. Introduction to statistical data analysis with R.
2nd edition, 2021.

Tools and aids: Additional Books
Internet (websites, blogs, fora, videos, etc.)
FELIX Forum (ask questions, post problems, etc. - everybody is allowed to answer!)
YouTube videos

Exam: Solve and submit exercises during the semester (graded!)
Grading of solutions: 50% code, 50% explanations and interpretations

Submit your solutions till 3rd July 2022, 23:59
by email to kohl@hs-furtwangen.de

Chapters	Tasks
1	1) Read Chapter 1 of Kohl (2021)
	2) Install the newest version of the statistical software R
	3) Install the newest version of RStudio IDE
	4) Solve the Exercises of Section 1.6 (no submission!)
2	1) Read Sections 2.1-2.4 of Kohl (2021)
	ICU data: https://github.com/stamats/ISDR/blob/main/ICUData.csv
	R markdown files: https://github.com/stamats/ISDR
	Put all files including the dataset in one (!) folder
	(no sub-folders!!!)
	2) Read Sections 2.5 and 2.6 of Kohl (2021)
	Go through the R markdown file DescriptiveStatistics.Rmd and run all code
	Get familiar with R, RStudio, and R markdown
	3) Solve **exercises 2, 4, 7, 10 and 12 of Section 2.7**
	Points: 50 (10 per exercise)
3	1) Read Chapter 3 of Kohl (2021)
	Go through the R markdown file Colors.Rmd and run all code
	2) Solve **exercises 1, 2, 3 and 4 of Section 3.4**
	Points: 25 (exercises 1, 2, 4 each 5 points, 10 points exercise 3)
4	1) Read Chapter 4 of Kohl (2021)
	Go through the respective part of the R markdown file ProbabilityDistributions.Rmd and run all code
	2) Solve **exercises 4, 6, 8, 13 and 15 of Section 4.3**
	Points: 50 (10 per exercise)
5	1) Read Chapter 5 of Kohl (2021)
	Go through the respective part of the R markdown file Estimation.Rmd

and run all code

2) Solve **exercises 3, 6, 9, 14, 18 und 21 of Section 5.4**
Points: 80 (ex. 3, 21 each 10 points, ex. 6, 9, 14, 18 each 15 points)

6	1) Read Chapter 6 of Kohl (2021) Go through the respective part of the R markdown file Tests.Rmd and run all code 2) Solve **exercises 2, 5, 7, 11, 13, 16, 19 of Section 6.4** Points: 90 (ex. 2, 5, 19 each 10 points, ex. 7, 11, 13, 16 each 15 points)
7	1) Read Chapter 7 of Kohl (2021) Go through the respective part of the R markdown file MultipleTesting.Rmd and run all code 2) Solve **exercises 1, 2, 3 of Section 7.4** Points: 35 (ex. 1, 2 each 10 points, 15 points ex. 3)