

Parameter and Confidence Interval Estimation in Dynamic Models: Maximum Likelihood and Bootstrapping Methods

Read Me File

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This archive contains the R-scripts, as well as the files (models, runs, data, etc.) and instructions to replicate the examples and proposed exercises (challenge) of chapter 1. Details on how to use the utilities are provided in the “MLE APPROACH TO SIMULATION – Appendix.pdf” file in this archive as well as in the main text. For setup instructions see below (as well as the appendix)

Table A1. Documents, R-scripts, and data included in the online appendix

Document	Contents	Main R-script	Subordinate R-scripts used	Data
Main document	Theory Application Challenge	CH1_MLE_BO OT_ Application.R	CH1_MLE_Functions.R CH1_BOOT_Functions.R CH1_LR_Interval_Functions.R	ServiceQuality Data2.csv
Appendix	Further detailing of MLE theory, using linear model as an example	CH1_MLE_BO OT_LinEx.R	CH1_LinEx_Functions.R	-
Challenge Solutions	Solutions to the challenge in the main document	CH1_MLE_BO OT_CHALLENGE.R	CH1_MLE_Functions.R CH1_BOOT_Functions.R CH1_LR_Interval_Functions.R CH1_Challenge_Functions.R	Beer Game Subject 1.csv
Required folder to save:		Scripts	Scripts	Data

All documents except the main document are provided in the electronic supplement on the publishers' handbook website. The electronic documents can also be requested from one of the authors (jeroen.struben@mcgill.ca).

Start instructions:

1. Create a work folder for your analysis. (You may use different work folders for the application and the challenge).
2. Within the work folder create three subfolders: “Scripts”, “Data”, and “BookChapterOutput”.
3. Save the provided documents, listed above, in the appropriate subfolders (“Scripts” or “Data”). Save any of your R-script files in the “Script” folder.

Note: Figures will be saved in the folder “BookChapterOutput”.