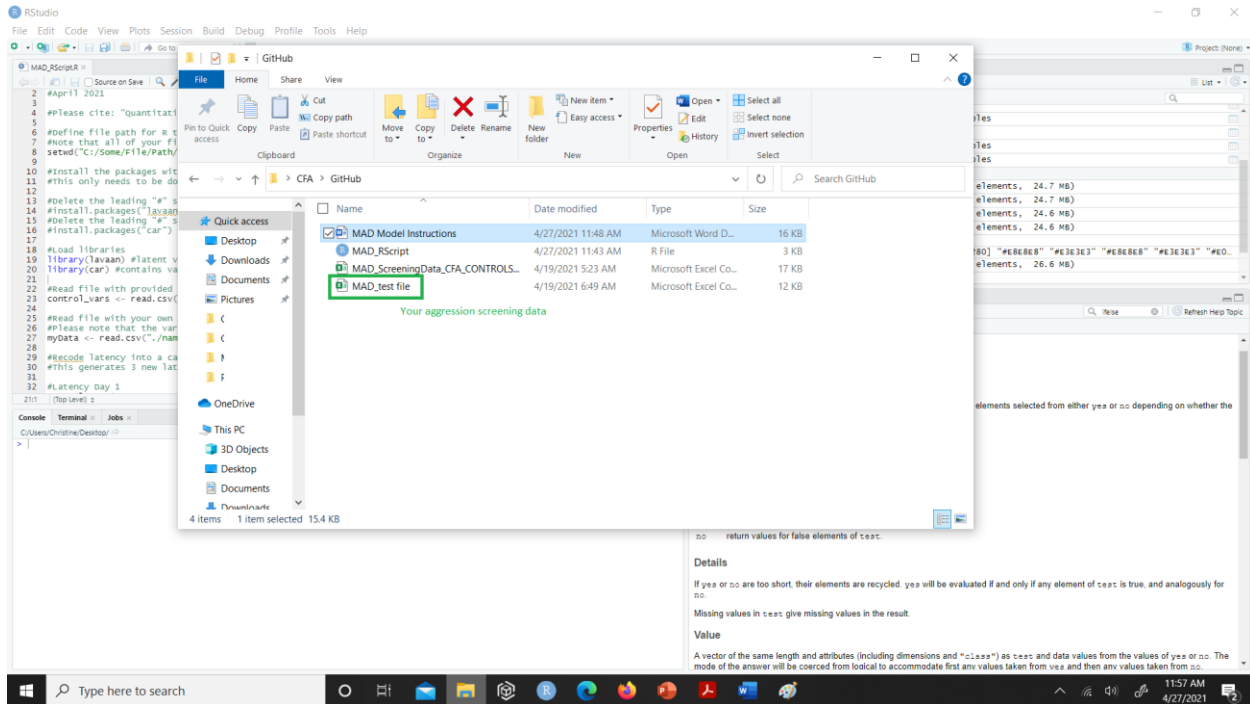


## MAD Model Instructions

1. For your analysis, you will need R (<https://cran.r-project.org/>) and RStudio (<https://www.rstudio.com/products/rstudio/download/>) on your computer.
2. You will also need the provided control data to generate the MAD aggression model (**MAD\_ScreeningData\_CFA\_CONTROLONLY.csv**), the provided R code (**MAD\_RScript.R**), and your own resident-intruder, aggression screening data in a CSV file. These files should be saved in the same file folder on your computer.



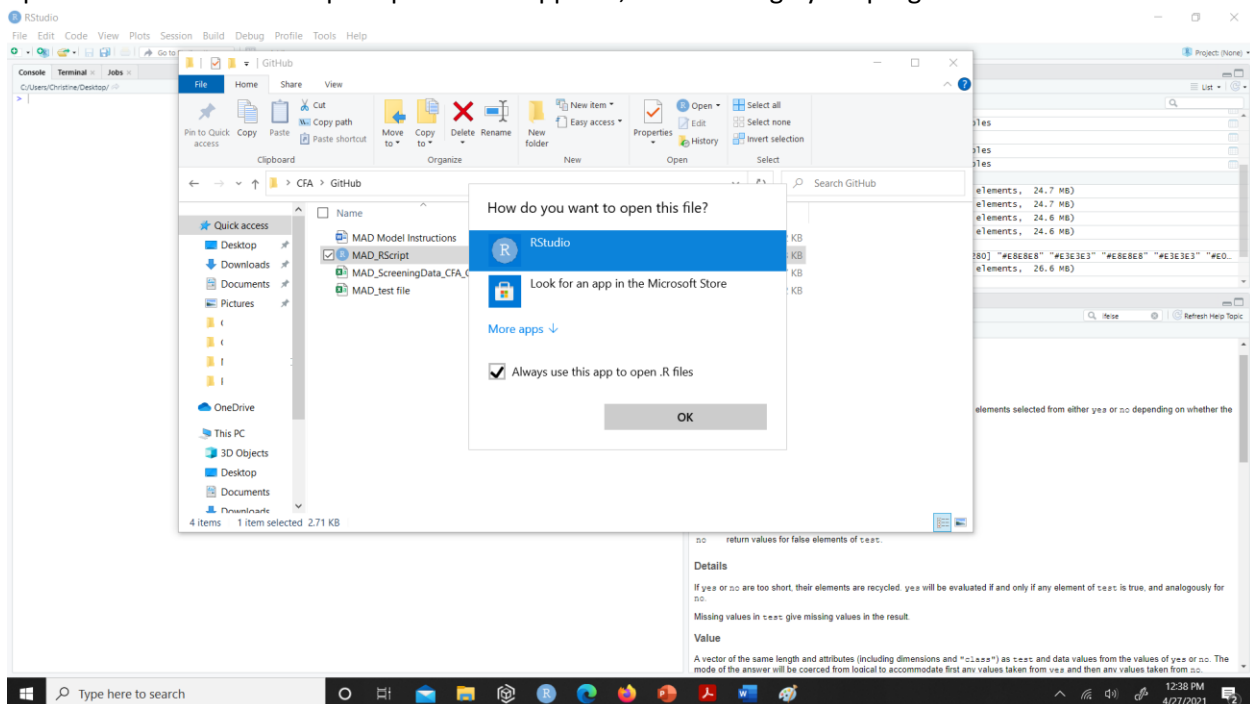
3. **DATA FORMATTING:** Prior to working in the RStudio environment, please make sure that your CSV data file is in a wide format such that each row represents a single animal and each column represents a single variable.

	A	B	C	D	E	F	G	H	I	J	K
1	MOUSE ID	B1	B2	B3	L1	L2	L3	D1	D2	D3	
2	1	3	4	4	133	17	1	14	12	8	
3	2	4	6	9	114	12	2	14	4	5	
4	3	6	2	2	41	5	8	5	5	8	
5	4	9	6	4	23	2	5	4	9	13	
6	5	6	12	16	20	9	2	6	4	4	

4. **DATA FORMATTING:** The RScript, containing the model code, references your raw data by variable name. For high throughput data processing, match your variable names to those already written into the script. See the data dictionary below.

Variable Name	Variable Description
Mouse ID	Unique identifier assigned to study animals
B1	Count of bouts on day 1 of screening
B2	Count of bouts on day 2 of screening
B3	Count of bouts on day 3 of screening
L1	Number of seconds to the first attack bout on day 1 of screening  Animals with zero bouts are assigned a value of 180.
L2	Number of seconds to the first attack bout on day 2 of screening  Animals with zero bouts are assigned a value of 180.
L3	Number of seconds to the first attack bout on day 3 of screening  Animals with zero bouts are assigned a value of 180.
D1	Average length of attack bouts on day 1 of screening
D2	Average length of attack bouts on day 2 of screening
D3	Average length of attack bouts on day 3 of screening
L1_v2	Categorical recode of L1 generated during the analysis
L2_v2	Categorical recode of L2 generated during the analysis
L3_v2	Categorical recode of L3 generated during the analysis

5. Double-click on the the **MAD\_RScript** file. It should automatically open in RStudio. This file has a .R file extension and your computer may prompt you to choose how you want to open such files if you have never opened one before. If the prompt window appears, scroll through your program list to select RStudio.

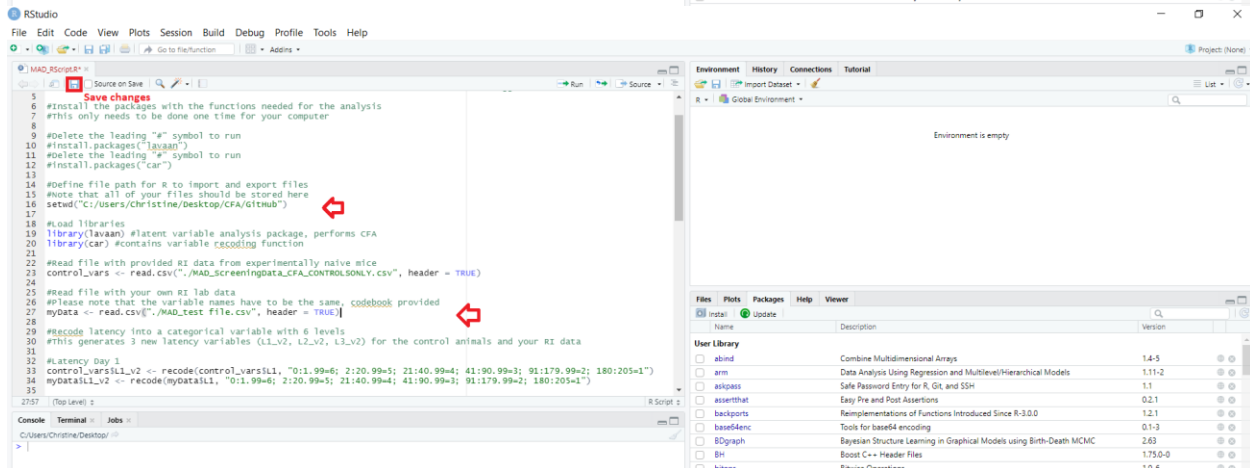
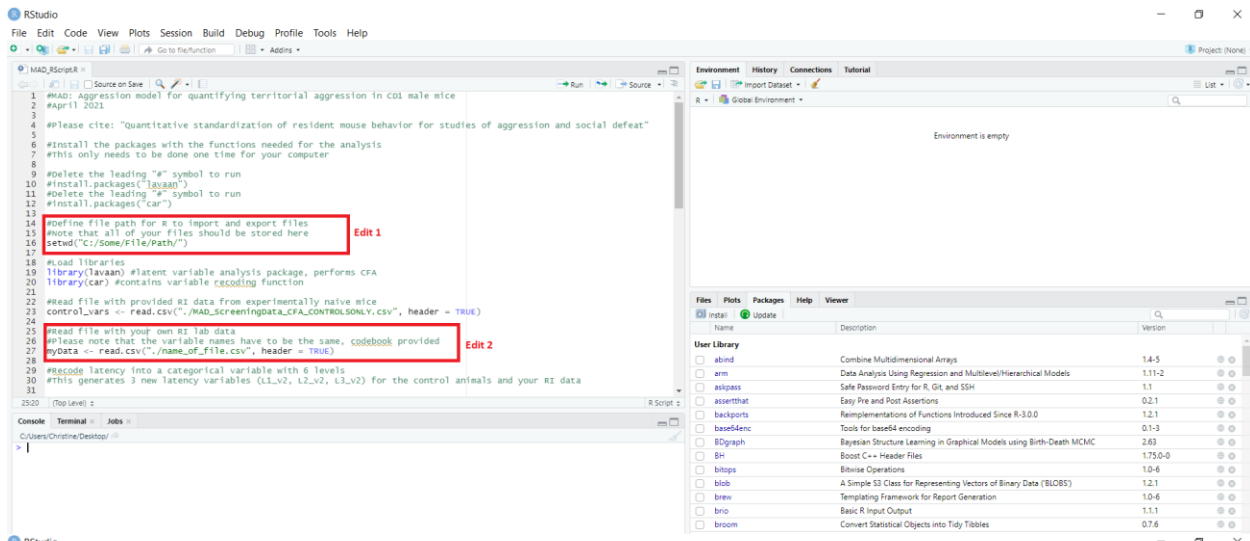


6. **PACKAGE INSTALLATION:** R and RStudio run many different types of analyses using specific code functions from packages developed with the necessary analytical tools. These packages only need to be installed on your

computer one time. If you have never used the **lavaan** or **car** packages, you will need to run the package installation commands at the top of the script. To do this, remove the

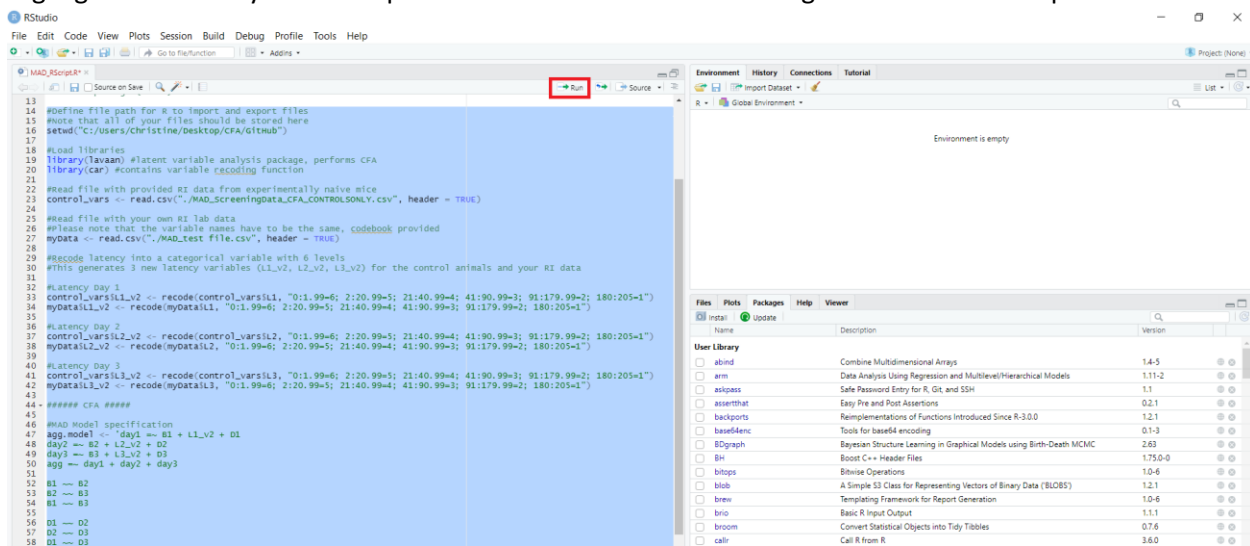
The screenshot shows the RStudio interface with a script file named `MAD_RScript.R`. The script contains the following code:

```
1 #install the packages with the functions needed for the analysis
2 #this only needs to be done one time for your computer
3
4 #Delete the leading "a" symbol to run
5 #install.packages("lavaan")
6 #Delete the leading "a" symbol to run
7 #install.packages("car")
8
9 #define file path for R to import and export files
10 #note that all of your files should be stored here
11 setwd("C:/Some/File/Path/")
12
13 #load libraries
14 library(lavaan) #latent variable analysis package, performs CFA
15 library(car) #contains variable recoding function
16
17 #read file with provided RI data from experimentally naive mice
18 control_vars <- read.csv("MAD_Screeningdata_CFA_CONTROLONLY.csv", header = TRUE)
19
20 #read file with your own RI lab data
21 #please note that the variable names have to be the same, codebook provided
22 mydata <- read.csv("name_of_file.csv", header = TRUE)
23
24 #Recode latency into a categorical variable with 6 levels
25 #this generates 3 new latency variables (L1_v2, L2_v2, L3_v2) for the control animals and your RI data
26
27 #Latency Day 1
28 control_vars$L1_v2 <- recode(control_vars$L1, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
29 mydata$L1_v2 <- recode(mydata$L1, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
30
31 #Top Level 2
32
33 #Latency Day 2
34 control_vars$L2_v2 <- recode(control_vars$L2, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
35 mydata$L2_v2 <- recode(mydata$L2, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
36
37 #Top Level 3
38
39 #Latency Day 3
40 control_vars$L3_v2 <- recode(control_vars$L3, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
41 mydata$L3_v2 <- recode(mydata$L3, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
42
43 #Top Level 4
44
45 #Latency Day 4
46 control_vars$L4_v2 <- recode(control_vars$L4, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
47 mydata$L4_v2 <- recode(mydata$L4, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
48
49 #Top Level 5
50
51 #Latency Day 5
52 control_vars$L5_v2 <- recode(control_vars$L5, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
53 mydata$L5_v2 <- recode(mydata$L5, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
54
55 #Top Level 6
56
57 #Latency Day 6
58 control_vars$L6_v2 <- recode(control_vars$L6, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
59 mydata$L6_v2 <- recode(mydata$L6, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
60
61 #Top Level 7
62
63 #Latency Day 7
64 control_vars$L7_v2 <- recode(control_vars$L7, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
65 mydata$L7_v2 <- recode(mydata$L7, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
66
67 #Top Level 8
68
69 #Latency Day 8
70 control_vars$L8_v2 <- recode(control_vars$L8, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
71 mydata$L8_v2 <- recode(mydata$L8, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
72
73 #Top Level 9
74
75 #Latency Day 9
76 control_vars$L9_v2 <- recode(control_vars$L9, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
77 mydata$L9_v2 <- recode(mydata$L9, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
78
79 #Top Level 10
80
81 #Latency Day 10
82 control_vars$L10_v2 <- recode(control_vars$L10, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
83 mydata$L10_v2 <- recode(mydata$L10, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
84
85 #Top Level 11
86
87 #Latency Day 11
88 control_vars$L11_v2 <- recode(control_vars$L11, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
89 mydata$L11_v2 <- recode(mydata$L11, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
90
91 #Top Level 12
92
93 #Latency Day 12
94 control_vars$L12_v2 <- recode(control_vars$L12, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
95 mydata$L12_v2 <- recode(mydata$L12, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
96
97 #Top Level 13
98
99 #Latency Day 13
100 control_vars$L13_v2 <- recode(control_vars$L13, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
101 mydata$L13_v2 <- recode(mydata$L13, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
102
103 #Top Level 14
104
105 #Latency Day 14
106 control_vars$L14_v2 <- recode(control_vars$L14, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
107 mydata$L14_v2 <- recode(mydata$L14, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
108
109 #Top Level 15
110
111 #Latency Day 15
112 control_vars$L15_v2 <- recode(control_vars$L15, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
113 mydata$L15_v2 <- recode(mydata$L15, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
114
115 #Top Level 16
116
117 #Latency Day 16
118 control_vars$L16_v2 <- recode(control_vars$L16, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
119 mydata$L16_v2 <- recode(mydata$L16, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
120
121 #Top Level 17
122
123 #Latency Day 17
124 control_vars$L17_v2 <- recode(control_vars$L17, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
125 mydata$L17_v2 <- recode(mydata$L17, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
126
127 #Top Level 18
128
129 #Latency Day 18
130 control_vars$L18_v2 <- recode(control_vars$L18, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
131 mydata$L18_v2 <- recode(mydata$L18, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
132
133 #Top Level 19
134
135 #Latency Day 19
136 control_vars$L19_v2 <- recode(control_vars$L19, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
137 mydata$L19_v2 <- recode(mydata$L19, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
138
139 #Top Level 20
140
141 #Latency Day 20
142 control_vars$L20_v2 <- recode(control_vars$L20, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
143 mydata$L20_v2 <- recode(mydata$L20, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
144
145 #Top Level 21
146
147 #Latency Day 21
148 control_vars$L21_v2 <- recode(control_vars$L21, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
149 mydata$L21_v2 <- recode(mydata$L21, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
150
151 #Top Level 22
152
153 #Latency Day 22
154 control_vars$L22_v2 <- recode(control_vars$L22, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
155 mydata$L22_v2 <- recode(mydata$L22, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
156
157 #Top Level 23
158
159 #Latency Day 23
160 control_vars$L23_v2 <- recode(control_vars$L23, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
161 mydata$L23_v2 <- recode(mydata$L23, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
162
163 #Top Level 24
164
165 #Latency Day 24
166 control_vars$L24_v2 <- recode(control_vars$L24, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
167 mydata$L24_v2 <- recode(mydata$L24, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
168
169 #Top Level 25
170
171 #Latency Day 25
172 control_vars$L25_v2 <- recode(control_vars$L25, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
173 mydata$L25_v2 <- recode(mydata$L25, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
174
175 #Top Level 26
176
177 #Latency Day 26
178 control_vars$L26_v2 <- recode(control_vars$L26, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
179 mydata$L26_v2 <- recode(mydata$L26, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
180
181 #Top Level 27
182
183 #Latency Day 27
184 control_vars$L27_v2 <- recode(control_vars$L27, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
185 mydata$L27_v2 <- recode(mydata$L27, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
186
187 #Top Level 28
188
189 #Latency Day 28
190 control_vars$L28_v2 <- recode(control_vars$L28, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
191 mydata$L28_v2 <- recode(mydata$L28, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
192
193 #Top Level 29
194
195 #Latency Day 29
196 control_vars$L29_v2 <- recode(control_vars$L29, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
197 mydata$L29_v2 <- recode(mydata$L29, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
198
199 #Top Level 30
200
201 #Latency Day 30
202 control_vars$L30_v2 <- recode(control_vars$L30, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
203 mydata$L30_v2 <- recode(mydata$L30, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
204
205 #Top Level 31
206
207 #Latency Day 31
208 control_vars$L31_v2 <- recode(control_vars$L31, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
209 mydata$L31_v2 <- recode(mydata$L31, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
210
211 #Top Level 32
212
213 #Latency Day 32
214 control_vars$L32_v2 <- recode(control_vars$L32, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
215 mydata$L32_v2 <- recode(mydata$L32, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
216
217 #Top Level 33
218
219 #Latency Day 33
220 control_vars$L33_v2 <- recode(control_vars$L33, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
221 mydata$L33_v2 <- recode(mydata$L33, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
222
223 #Top Level 34
224
225 #Latency Day 34
226 control_vars$L34_v2 <- recode(control_vars$L34, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
227 mydata$L34_v2 <- recode(mydata$L34, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
228
229 #Top Level 35
230
231 #Latency Day 35
232 control_vars$L35_v2 <- recode(control_vars$L35, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
233 mydata$L35_v2 <- recode(mydata$L35, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
234
235 #Top Level 36
236
237 #Latency Day 36
238 control_vars$L36_v2 <- recode(control_vars$L36, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
239 mydata$L36_v2 <- recode(mydata$L36, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
240
241 #Top Level 37
242
243 #Latency Day 37
244 control_vars$L37_v2 <- recode(control_vars$L37, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
245 mydata$L37_v2 <- recode(mydata$L37, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
246
247 #Top Level 38
248
249 #Latency Day 38
250 control_vars$L38_v2 <- recode(control_vars$L38, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
251 mydata$L38_v2 <- recode(mydata$L38, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
252
253 #Top Level 39
254
255 #Latency Day 39
256 control_vars$L39_v2 <- recode(control_vars$L39, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
257 mydata$L39_v2 <- recode(mydata$L39, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
258
259 #Top Level 40
260
261 #Latency Day 40
262 control_vars$L40_v2 <- recode(control_vars$L40, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
263 mydata$L40_v2 <- recode(mydata$L40, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
264
265 #Top Level 41
266
267 #Latency Day 41
268 control_vars$L41_v2 <- recode(control_vars$L41, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
269 mydata$L41_v2 <- recode(mydata$L41, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
270
271 #Top Level 42
272
273 #Latency Day 42
274 control_vars$L42_v2 <- recode(control_vars$L42, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
275 mydata$L42_v2 <- recode(mydata$L42, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
276
277 #Top Level 43
278
279 #Latency Day 43
280 control_vars$L43_v2 <- recode(control_vars$L43, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
281 mydata$L43_v2 <- recode(mydata$L43, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
282
283 #Top Level 44
284
285 #Latency Day 44
286 control_vars$L44_v2 <- recode(control_vars$L44, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
287 mydata$L44_v2 <- recode(mydata$L44, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
288
289 #Top Level 45
290
291 #Latency Day 45
292 control_vars$L45_v2 <- recode(control_vars$L45, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
293 mydata$L45_v2 <- recode(mydata$L45, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
294
295 #Top Level 46
296
297 #Latency Day 46
298 control_vars$L46_v2 <- recode(control_vars$L46, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
299 mydata$L46_v2 <- recode(mydata$L46, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
300
301 #Top Level 47
302
303 #Latency Day 47
304 control_vars$L47_v2 <- recode(control_vars$L47, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
305 mydata$L47_v2 <- recode(mydata$L47, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
306
307 #Top Level 48
308
309 #Latency Day 48
310 control_vars$L48_v2 <- recode(control_vars$L48, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
311 mydata$L48_v2 <- recode(mydata$L48, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
312
313 #Top Level 49
314
315 #Latency Day 49
316 control_vars$L49_v2 <- recode(control_vars$L49, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
317 mydata$L49_v2 <- recode(mydata$L49, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
318
319 #Top Level 50
320
321 #Latency Day 50
322 control_vars$L50_v2 <- recode(control_vars$L50, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
323 mydata$L50_v2 <- recode(mydata$L50, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
324
325 #Top Level 51
326
327 #Latency Day 51
328 control_vars$L51_v2 <- recode(control_vars$L51, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
329 mydata$L51_v2 <- recode(mydata$L51, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
330
331 #Top Level 52
332
333 #Latency Day 52
334 control_vars$L52_v2 <- recode(control_vars$L52, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
335 mydata$L52_v2 <- recode(mydata$L52, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
336
337 #Top Level 53
338
339 #Latency Day 53
340 control_vars$L53_v2 <- recode(control_vars$L53, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
341 mydata$L53_v2 <- recode(mydata$L53, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
342
343 #Top Level 54
344
345 #Latency Day 54
346 control_vars$L54_v2 <- recode(control_vars$L54, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
347 mydata$L54_v2 <- recode(mydata$L54, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
348
349 #Top Level 55
350
351 #Latency Day 55
352 control_vars$L55_v2 <- recode(control_vars$L55, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
353 mydata$L55_v2 <- recode(mydata$L55, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
354
355 #Top Level 56
356
357 #Latency Day 56
358 control_vars$L56_v2 <- recode(control_vars$L56, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
359 mydata$L56_v2 <- recode(mydata$L56, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
360
361 #Top Level 57
362
363 #Latency Day 57
364 control_vars$L57_v2 <- recode(control_vars$L57, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2; 180:205=1")
365 mydata$L57_v2 <- recode(mydata$L57, "0:1.99=6; 2:20.99=5; 21:40.99=4; 41:90.99=3; 91:179.99=2
```



9. For both step 7 and 8, please note that R is case sensitive, requires the use of forward slashes. For step 8, please note that R requires the file extension of your file.

10. Highlight the entirety of the script and click the “Run” icon in the right corner of the script window.



11. Review the new **aggScores.csv** file in the folder you indicated in step 7.

The screenshot shows the RStudio interface. A file explorer window is open, displaying the contents of the 'CFA' folder. The file 'aggScores' is highlighted with a red box. The file is a Microsoft Excel file, created on 4/27/2021 at 1:57 PM. The RStudio console shows the execution of R code, including the definition of file paths and the loading of data. The Environment pane on the right shows the objects in the global environment, including 'control\_vars', 'MAD1', 'mydata', and 'new\_data\_MAD'. The Files pane at the bottom shows the installed packages, including 'abind', 'arm', 'assertthat', 'backports', 'base64enc', 'BGLgraph', 'BIR', 'bitops', 'blob', and 'brew'.

RStudio

File Edit Code View Plots Session Build Debug Profile Tools Help

Go to file/function Addins

Run Source

Source on Save

File Home Share View

Pin to Quick access Copy Paste Cut Copy path Move Copy to Delete Rename New folder Properties Edit Select all Select none Invert selection

Clipboard

Clipboard Paste shortcut Paste shortcut

Organize

New

Open Open History

Search GitHub

Quick access

Desktop

Downloads

Documents

Pictures

CFA

GitHub

Name

Date modified

Type

Size

aggScores

MAD Model Instructions

MAD\_RScript

MAD\_ScreeningData\_CFA\_CONTROLS..

MAD\_test file

4/27/2021 1:57 PM

4/27/2021 1:54 PM

4/27/2021 1:14 PM

4/19/2021 5:23 AM

4/19/2021 6:49 AM

Microsoft Excel Co..

Microsoft Word D..

R File

Microsoft Excel Co..

Microsoft Excel Co..

Environment History Connections Tutorial

Project (None)

Global Environment

Data

control\_vars

MAD1

mydata

new\_data\_MAD

579 obs. of 13 variables

Formal class 'Iavaan'

210 obs. of 17 variables

'Iavaan.matrix' num [1:210, 1:4] 4.86 3.79 3.93 1.6 1.46 ...

Values

agg\_model

"day1 ~ B1 + L1\_v2 + D1\nday2 ~ B2 + L2\_v2 + D2\nday3 ~ B3 + L3\_v2 + D3"

Files Plots Packages Help Viewer

install update

User Library

abind

arm

assertthat

backports

base64enc

BGLgraph

BIR

bitops

blob

brew

Combine Multidimensional Arrays

Data Analysis Using Regression and Multilevel/Hierarchical Models

Safe Password Entry for R, Git, and SSH

Easy Pre and Post Assertions

Reimplementations of Functions Introduced Since R-3.0.0

Tools for base64 encoding

Bayesian Structure Learning in Graphical Models using Birth-Death MCMC

Boost C++ Header Files

Bitwise Operations

A Simple S3 Class for Representing Vectors of Binary Data (BLOB5)

Templating Framework for Report Generation

1.4-5

1.11-2

1.1

0.2.1

1.2.1

0.1-3

2.63

1.75.0-0

1.0-6

1.2.1

1.0-6