ACE_Metric ELTOTAL

2022-06-03

Data loading

```
library(readr); library(readxl)

# Getting predictions for ACE calculation
outData_All_pred_ELRETSALTOTAL <- read_excel("outData_All_pred_ELRETSALTOTAL.xlsx")
```

```
## New names:
## * `True` -> `True...4`
## * `True` -> `True...8`
## * `True` -> `True...12`
## * `True` -> `True...16`
```

```
# Same name for the calculations
df <- outData_All_pred_ELRETSALTOTAL
colnames(df) <- colnames(outData_All_pred_ELRETSALTOTAL)
```

Playing with the data to PICP

```
library(dplyr); library(tidyr); library(magrittr)
```

```
##
## Attaching package: 'dplyr'

## The following objects are masked from 'package:stats':
##
##     filter, lag

## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union

##
## Attaching package: 'magrittr'

## The following object is masked from 'package:tidyr':
##
##     extract
```

```r
# Dplyr remove a column by name:

df_w_true <- df %>%
  select(-c(4,8,12))

#true <- df %>% select(c(4))

colnames(df_w_true)[dim(df_w_true)[2]] <- c("True")
#head(true)
```

```r
# For alpha = 0.1

observ <- df_w_true$True
n <- (dim(df_w_true)[2]-1)
ci <- rep(0, n)
ci
```

```
##  [1] 0 0 0 0 0 0 0 0 0 0 0 0
```

```r
for (j in 1:(dim(df_w_true)[2]-1)) {
  ci[j] <- df_w_true %>%
  mutate(ci = ifelse(.[[j]] >= observ, 0, 1)) %>%
  select(ci) %>% sum()
  ci
}

#ci <- df_w_true %>%
#  mutate(ci = ifelse(DVQR_01 >= observ, 0, 1)) %>%
#  select(ci) %>% sum()
#ci

PICP <- ci/dim(df_w_true)[1]
PICP
```

```
##  [1] 0.48936170 0.42553191 0.46808511 0.36879433 0.31205674 0.37588652
##  [7] 0.26241135 0.15602837 0.17730496 0.03546099 0.01418440 0.01418440
```

```r
# ORDER FOR MODELS: DVQR - NPDVQR - LQR
# For 0.1 case
ACE_01 <- PICP[c(1,2,3)] - 0.1
ACE_01
```

```
## [1] 0.3893617 0.3255319 0.3680851
```

```r
# For 0.25 case
ACE_025 <- PICP[c(4,5,6)] - 0.25
ACE_025
```

```
## [1] 0.11879433 0.06205674 0.12588652
```

```r
# For 0.5 case
ACE_05 <- PICP[c(7,8,9)] - 0.5
ACE_05
```

```
## [1] -0.2375887 -0.3439716 -0.3226950
```

```r
# For 0.9 case
ACE_09 <- PICP[c(10,11,12)] - 0.9
ACE_09
```

```
## [1] -0.8645390 -0.8858156 -0.8858156
```

```r
# combine all of them

ACE_All <- cbind(ACE_01, ACE_025, ACE_05, ACE_09)

rownames(ACE_All) <- c("DVQR", "NPDVQR", "LQR")
library(pander)
pander(ACE_All)
```

	ACE_01	ACE_025	ACE_05	ACE_09
DVQR	0.3894	0.1188	-0.2376	-0.8645
NPDVQR	0.3255	0.06206	-0.344	-0.8858
LQR	0.3681	0.1259	-0.3227	-0.8858