graph

WENXI ZHANG

6/1/2022

#mortgage

```r
#change loan_val
library("SortedEffects")
library('FOCI')
library(regtools)
library(qeML)
mortgage[,1] <- as.factor(mortgage[,1])
runexptout <-runExpt(10,"qeFairKNN(mortgage,'deny', deweightPars=c(loan_val=xoxo,mcred=0.5,ltv_med=0.5)
```

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```r
#overall probablistic of classification
xyzPlotEDF(cbind(runexptout$V2,runexptout$V3,runexptout$V1,runexptout$code),clrs=palette(),
                xlim=expandRange(range(runexptout$V2),1.2),
                ylim=expandRange(range(runexptout$V3),3.2),
                xlab = 'OPM',ylab = 'correlation',
                legendPos='bottomright')
```

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```
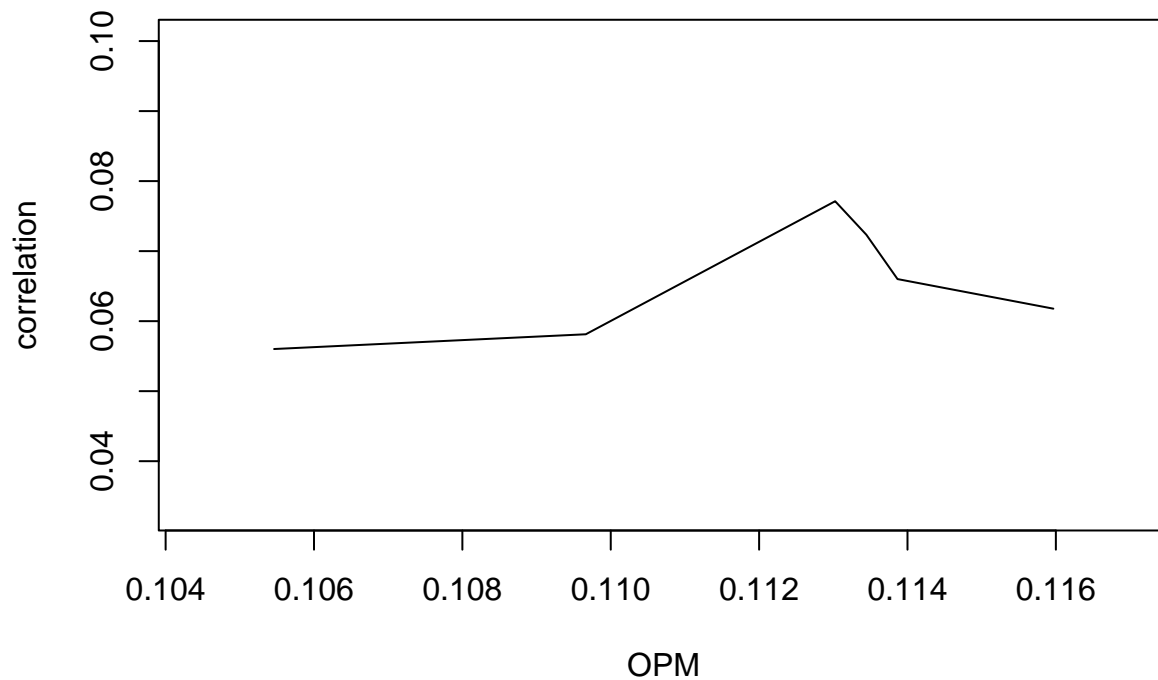
```
runexptout <-runExpt(10,"qeFairKNN(mortgage,'deny', deweightPars=c(loan_val=0.5,mcred=0.5,ltv_med=xoxo)
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xyzPlotEDF(cbind(runexptout$V2,runexptout$V3,runexptout$V1,runexptout$code),clrs=palette(),
                 xlim=expandRange(range(runexptout$V2),1.2),
                 ylim=expandRange(range(runexptout$V3),3.2),
                 xlab = 'OPM',ylab = 'correlation',
                 legendPos='bottomright')
```

```
# pima
# C <-foci(Y=pima$Age,X=pima[,c(-9,-8)])
#
# C$selectedVar
# 1 NPreg
# 4 Thick
# 3 BP
```

```
replicMeans(50,"{pm_knn <- qeFairKNN(pima,yName='Diab',sensNames='Age');c(pm_knn$testAcc,pm_knn$corrs)}
```

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##                   Age
## 0.2634211 0.1859290
## attr(,"stderr")
##                   Age
## 0.005531428 0.011154640
```

```r
#test acc   corrs
#0.2618421 0.2069602
runexptout <-runExpt(20,"qeFairKNN(pima,yName='Diab', deweightPars=c(NPreg=xoxo),sensNames='Age')",c(0.9
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# $V1
# [1] 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1
#
# $V2
# [1] 0.2638158 0.2605263 0.2664474 0.2427632 0.2618421 0.2730263 0.2552632 0.2532895 0.2750000
#
# $V3
# [1] 0.21911312 0.16785212 0.18729299 0.17788047 0.17384626 0.14106738 0.15039199 0.09974380 0.0995958
#overall probablistic of classification
xyzPlotEDF(cbind(runexptout$V2,runexptout$V3,runexptout$V1,runexptout$code),clrs=palette(),
                  xlim=expandRange(range(runexptout$V2),1.2),
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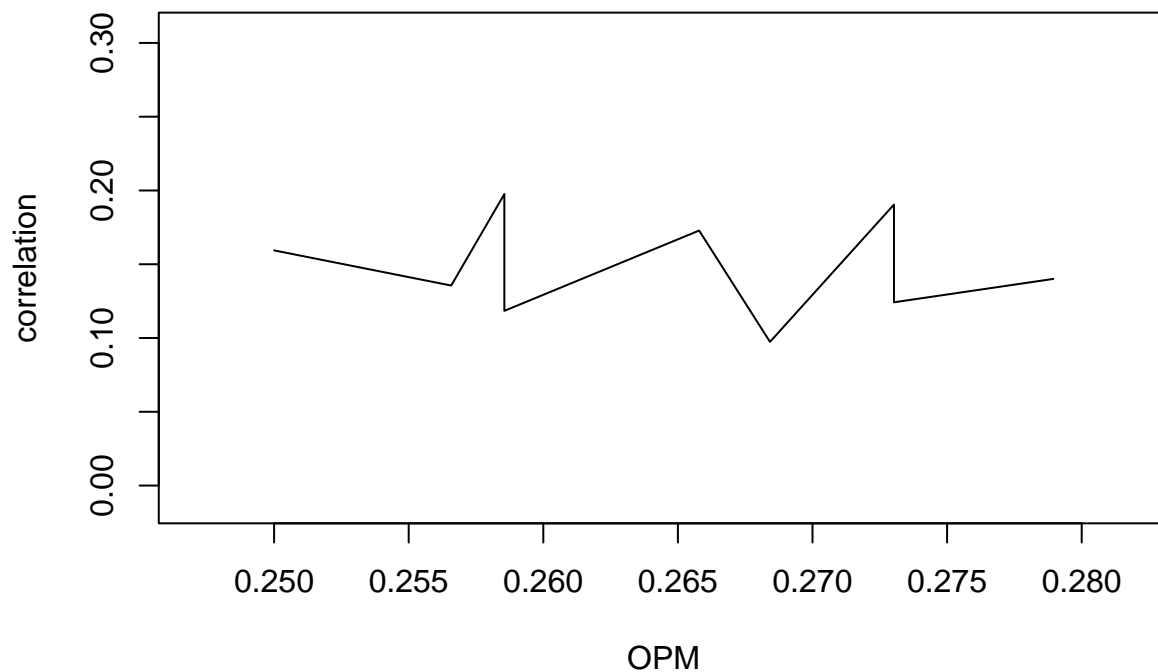


```
runexptout <-runExpt(20,"qeFairKNN(pima,yName='Diab', deweightPars=c(NPreg=xoxo,Thick=0.5,BP=0.5),sensNa
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```
runexptout
```

```
## $V1
## [1] 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1
##
## $V2
## [1] 0.2375000 0.2618421 0.2625000 0.2440789 0.2467105 0.2493421 0.2421053
## [8] 0.2421053 0.2434211
##
## $V3
## [1] 0.19773062 0.18605661 0.15105202 0.13971266 0.14597735 0.11306071 0.12217697
## [8] 0.07943786 0.07150407
##
## $code
## [1] "1" "1" "1" "1" "1" "1" "1" "1" "1"
##
## attr(,"row.names")
## [1] 1 2 3 4 5 6 7 8 9
## attr(,"class")
## [1] "runExpt"
```

```
# $V1
# [1] 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1
#
# $V2
# [1] 0.2546053 0.2125000 0.2453947 0.2460526 0.2651316 0.2328947 0.2414474 0.2664474 0.2467105
#
# $V3
# [1] 0.14918230 0.18074950 0.15188730 0.17056716 0.14559743 0.13569285 0.12073892 0.08925051 0.0703461

#overall probablistic of classification
xyzPlotEDF(cbind(runexptout$V2,runexptout$V3,runexptout$V1,runexptout$code),clrs=palette(),
                xlim=expandRange(range(runexptout$V2),1.2),
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                xlab = 'OPM',ylab = 'correlation',
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