MLR.R

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```r
emp_churn <- read.csv("C:/Users/19737/Downloads/emp_churn.csv", header=TRUE,
stringsAsFactors=FALSE)

str(emp_churn)

## 'data.frame':    1470 obs. of  35 variables:
##  $ ï..Age                  : int  41 49 37 33 27 32 59 30 38 36 ...
##  $ Attrition               : chr  "Yes" "No" "Yes" "No" ...
##  $ BusinessTravel          : chr  "Travel_Rarely" "Travel_Frequently"
"Travel_Rarely" "Travel_Frequently" ...
##  $ DailyRate               : int  1102 279 1373 1392 591 1005 1324 1358
216 1299 ...
##  $ Department              : chr  "Sales" "Research & Development"
"Research & Development" "Research & Development" ...
##  $ DistanceFromHome        : int  1 8 2 3 2 2 3 24 23 27 ...
##  $ Education               : int  2 1 2 4 1 2 3 1 3 3 ...
##  $ EducationField          : chr  "Life Sciences" "Life Sciences" "Other"
"Life Sciences" ...
##  $ EmployeeCount           : int  1 1 1 1 1 1 1 1 1 1 ...
##  $ EmployeeNumber          : int  1 2 4 5 7 8 10 11 12 13 ...
##  $ EnvironmentSatisfaction : int  2 3 4 4 1 4 3 4 4 3 ...
##  $ Gender                  : chr  "Female" "Male" "Male" "Female" ...
##  $ HourlyRate              : int  94 61 92 56 40 79 81 67 44 94 ...
##  $ JobInvolvement          : int  3 2 2 3 3 3 4 3 2 3 ...
##  $ JobLevel                : int  2 2 1 1 1 1 1 1 3 2 ...
##  $ JobRole                 : chr  "Sales Executive" "Research Scientist"
"Laboratory Technician" "Research Scientist" ...
##  $ JobSatisfaction         : int  4 2 3 3 2 4 1 3 3 3 ...
##  $ MaritalStatus           : chr  "Single" "Married" "Single" "Married"
...
##  $ MonthlyIncome           : int  5993 5130 2090 2909 3468 3068 2670 2693
9526 5237 ...
##  $ MonthlyRate             : int  19479 24907 2396 23159 16632 11864 9964
13335 8787 16577 ...
##  $ NumCompaniesWorked      : int  8 1 6 1 9 0 4 1 0 6 ...
##  $ Over18                  : chr  "Y" "Y" "Y" "Y" ...
##  $ OverTime                : chr  "Yes" "No" "Yes" "Yes" ...
##  $ PercentSalaryHike       : int  11 23 15 11 12 13 20 22 21 13 ...
##  $ PerformanceRating       : int  3 4 3 3 3 3 4 4 4 3 ...
##  $ RelationshipSatisfaction: int  1 4 2 3 4 3 1 2 2 2 ...
##  $ StandardHours           : int  80 80 80 80 80 80 80 80 80 80 ...
##  $ StockOptionLevel        : int  0 1 0 0 1 0 3 1 0 2 ...
```

```
##  $ TotalWorkingYears      : int  8 10 7 8 6 8 12 1 10 17 ...
##  $ TrainingTimesLastYear  : int  0 3 3 3 3 2 3 2 2 3 ...
##  $ WorkLifeBalance        : int  1 3 3 3 3 2 2 3 3 2 ...
##  $ YearsAtCompany         : int  6 10 0 8 2 7 1 1 9 7 ...
##  $ YearsInCurrentRole     : int  4 7 0 7 2 7 0 0 7 7 ...
##  $ YearsSinceLastPromotion : int  0 1 0 3 2 3 0 0 1 7 ...
##  $ YearsWithCurrManager   : int  5 7 0 0 2 6 0 0 8 7 ...
```

```r
library(data.table)
setDT(emp_churn)

class(emp_churn)
```

```
## [1] "data.table" "data.frame"
```

```r
library(dplyr)
```

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

```
## The following objects are masked from 'package:data.table':
##
##     between, first, last
```

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

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

```r
library(ggplot2)
library(ggpubr)
```

```
## Loading required package: magrittr
```

```r
library(car)
```

```
## Warning: package 'car' was built under R version 3.6.3
```

```
## Loading required package: carData
```

```
##
## Attaching package: 'car'
```

```
## The following object is masked from 'package:dplyr':
##
##     recode
```

```r
emp_churn
```

```
##       ï..Age Attrition   BusinessTravel DailyRate             Department
##    1:     41       Yes    Travel_Rarely      1102                  Sales
##    2:     49        No Travel_Frequently      279 Research & Development
##    3:     37       Yes    Travel_Rarely      1373 Research & Development
##    4:     33        No Travel_Frequently     1392 Research & Development
##    5:     27        No    Travel_Rarely       591 Research & Development
##   ---
## 1466:     36        No Travel_Frequently      884 Research & Development
## 1467:     39        No    Travel_Rarely       613 Research & Development
## 1468:     27        No    Travel_Rarely       155 Research & Development
## 1469:     49        No Travel_Frequently     1023                  Sales
## 1470:     34        No    Travel_Rarely       628 Research & Development
##       DistanceFromHome Education EducationField EmployeeCount
## EmployeeNumber
##    1:                1         2  Life Sciences             1
## 1
##    2:                8         1  Life Sciences             1
## 2
##    3:                2         2          Other             1
## 4
##    4:                3         4  Life Sciences             1
## 5
##    5:                2         1        Medical             1
## 7
##   ---
## 1466:               23         2        Medical             1
## 2061
## 1467:                6         1        Medical             1
## 2062
## 1468:                4         3  Life Sciences             1
## 2064
## 1469:                2         3        Medical             1
## 2065
## 1470:                8         3        Medical             1
## 2068
##       EnvironmentSatisfaction Gender HourlyRate JobInvolvement JobLevel
##    1:                       2 Female         94              3        2
##    2:                       3   Male         61              2        2
##    3:                       4   Male         92              2        1
##    4:                       4 Female         56              3        1
##    5:                       1   Male         40              3        1
##   ---
## 1466:                       3   Male         41              4        2
## 1467:                       4   Male         42              2        3
## 1468:                       2   Male         87              4        2
## 1469:                       4   Male         63              2        2
## 1470:                       2   Male         82              4        2
##                       JobRole JobSatisfaction MaritalStatus
## MonthlyIncome
##    1:         Sales Executive               4        Single
```

```
5993
##    2:       Research Scientist              2       Married
5130
##    3:    Laboratory Technician             3        Single
2090
##    4:       Research Scientist              3       Married
2909
##    5:    Laboratory Technician             2       Married
3468
##    ---
## 1466:    Laboratory Technician             4       Married
2571
## 1467: Healthcare Representative            1       Married
9991
## 1468:    Manufacturing Director            2       Married
6142
## 1469:          Sales Executive             2       Married
5390
## 1470:    Laboratory Technician             3       Married
4404
##       MonthlyRate NumCompaniesWorked Over18 OverTime PercentSalaryHike
##    1:       19479                  8      Y      Yes                11
##    2:       24907                  1      Y       No                23
##    3:        2396                  6      Y      Yes                15
##    4:       23159                  1      Y      Yes                11
##    5:       16632                  9      Y       No                12
##    ---
## 1466:       12290                  4      Y       No                17
## 1467:       21457                  4      Y       No                15
## 1468:        5174                  1      Y      Yes                20
## 1469:       13243                  2      Y       No                14
## 1470:       10228                  2      Y       No                12
##       PerformanceRating RelationshipSatisfaction StandardHours
StockOptionLevel
##    1:                 3                        1            80
0
##    2:                 4                        4            80
1
##    3:                 3                        2            80
0
##    4:                 3                        3            80
0
##    5:                 3                        4            80
1
##    ---
## 1466:                 3                        3            80
1
## 1467:                 3                        1            80
1
## 1468:                 4                        2            80
```

```
1
## 1469:                     3                         4            80
0
## 1470:                     3                         1            80
0
##        TotalWorkingYears TrainingTimesLastYear WorkLifeBalance
YearsAtCompany
##     1:                 8                     0               1
6
##     2:                10                     3               3
10
##     3:                 7                     3               3
0
##     4:                 8                     3               3
8
##     5:                 6                     3               3
2
##    ---
## 1466:                17                     3               3
5
## 1467:                 9                     5               3
7
## 1468:                 6                     0               3
6
## 1469:                17                     3               2
9
## 1470:                 6                     3               4
4
##        YearsInCurrentRole YearsSinceLastPromotion YearsWithCurrManager
##     1:                  4                       0                    5
##     2:                  7                       1                    7
##     3:                  0                       0                    0
##     4:                  7                       3                    0
##     5:                  2                       2                    2
##    ---
## 1466:                  2                       0                    3
## 1467:                  7                       1                    7
## 1468:                  2                       0                    3
## 1469:                  6                       0                    8
## 1470:                  3                       1                    2

emp_churn[,1:35][emp_churn[,1:35] == "Yes"] = 1
emp_churn[,1:35][emp_churn[,1:35] == "No"] = 0

emp_churn$Gender[emp_churn$Gender=="Male"]=1;
emp_churn$Gender[emp_churn$Gender=="Female"]=0;

emp_churn$MaritalStatus[emp_churn$MaritalStatus=="Single"]=0;
emp_churn$MaritalStatus[emp_churn$MaritalStatus=="Married"]=1;
emp_churn$MaritalStatus[emp_churn$MaritalStatus=="Divorced"]=2;
```

```
x=lm(Attrition~ï..Age+BusinessTravel+DailyRate+DistanceFromHome+EnvironmentSa
tisfaction+MaritalStatus+HourlyRate+JobInvolvement+JobLevel+JobSatisfaction+M
aritalStatus+MonthlyIncome+OverTime+PercentSalaryHike+StandardHours+TotalWork
ingYears+WorkLifeBalance+YearsAtCompany+YearsInCurrentRole+YearsSinceLastProm
otion+YearsWithCurrManager, data=emp_churn)
x

##
## Call:
## lm(formula = Attrition ~ ï..Age + BusinessTravel + DailyRate +
##     DistanceFromHome + EnvironmentSatisfaction + MaritalStatus +
##     HourlyRate + JobInvolvement + JobLevel + JobSatisfaction +
##     MaritalStatus + MonthlyIncome + OverTime + PercentSalaryHike +
##     StandardHours + TotalWorkingYears + WorkLifeBalance + YearsAtCompany +
##     YearsInCurrentRole + YearsSinceLastPromotion + YearsWithCurrManager,
##     data = emp_churn)
##
## Coefficients:
##                  (Intercept)                        ï..Age
##                    8.341e-01                     -3.162e-03
## BusinessTravelTravel_Frequently    BusinessTravelTravel_Rarely
##                    1.514e-01                      6.512e-02
##                     DailyRate                DistanceFromHome
##                   -2.791e-05                      3.460e-03
##       EnvironmentSatisfaction                  MaritalStatus1
##                   -4.029e-02                     -1.102e-01
##                MaritalStatus2                      HourlyRate
##                   -1.349e-01                     -2.170e-04
##                JobInvolvement                        JobLevel
##                   -6.229e-02                     -2.387e-02
##               JobSatisfaction                   MonthlyIncome
##                   -4.033e-02                     -3.525e-07
##                     OverTime1               PercentSalaryHike
##                    2.024e-01                     -1.674e-03
##                 StandardHours               TotalWorkingYears
##                           NA                     -1.479e-03
##               WorkLifeBalance                   YearsAtCompany
##                   -2.903e-02                      2.603e-03
##            YearsInCurrentRole         YearsSinceLastPromotion
##                   -9.064e-03                      1.187e-02
##          YearsWithCurrManager
##                   -1.092e-02

summary(x)

##
## Call:
```

```
## lm(formula = Attrition ~ ï..Age + BusinessTravel + DailyRate +
##     DistanceFromHome + EnvironmentSatisfaction + MaritalStatus +
##     HourlyRate + JobInvolvement + JobLevel + JobSatisfaction +
##     MaritalStatus + MonthlyIncome + OverTime + PercentSalaryHike +
##     StandardHours + TotalWorkingYears + WorkLifeBalance + YearsAtCompany +
##     YearsInCurrentRole + YearsSinceLastPromotion + YearsWithCurrManager,
##     data = emp_churn)
##
## Residuals:
##      Min       1Q    Median       3Q      Max
## -0.56216 -0.20840 -0.09171  0.05753  1.11567
##
## Coefficients: (1 not defined because of singularities)
##                                 Estimate Std. Error t value Pr(>|t|)
## (Intercept)                    8.341e-01  9.065e-02   9.201  < 2e-16 ***
## ï..Age                        -3.162e-03  1.326e-03  -2.384  0.01726 *
## BusinessTravelTravel_Frequently 1.514e-01 3.360e-02   4.505 7.18e-06 ***
## BusinessTravelTravel_Rarely    6.512e-02  2.904e-02   2.243  0.02507 *
## DailyRate                     -2.791e-05  2.154e-05  -1.295  0.19538
## DistanceFromHome               3.460e-03  1.068e-03   3.239  0.00123 **
## EnvironmentSatisfaction       -4.029e-02  7.927e-03  -5.083 4.20e-07 ***
## MaritalStatus1                -1.102e-01  2.014e-02  -5.474 5.17e-08 ***
## MaritalStatus2                -1.349e-01  2.399e-02  -5.622 2.26e-08 ***
## HourlyRate                    -2.170e-04  4.271e-04  -0.508  0.61150
## JobInvolvement                -6.229e-02  1.220e-02  -5.107 3.71e-07 ***
## JobLevel                      -2.387e-02  2.604e-02  -0.917  0.35937
## JobSatisfaction               -4.033e-02  7.858e-03  -5.132 3.25e-07 ***
## MonthlyIncome                 -3.525e-07  6.016e-06  -0.059  0.95329
## OverTime1                      2.024e-01  1.924e-02  10.522  < 2e-16 ***
## PercentSalaryHike             -1.674e-03  2.365e-03  -0.708  0.47918
## StandardHours                         NA         NA      NA       NA
## TotalWorkingYears             -1.479e-03  2.358e-03  -0.627  0.53049
## WorkLifeBalance               -2.903e-02  1.227e-02  -2.365  0.01815 *
## YearsAtCompany                 2.603e-03  2.931e-03   0.888  0.37455
## YearsInCurrentRole            -9.064e-03  3.914e-03  -2.316  0.02070 *
## YearsSinceLastPromotion        1.187e-02  3.455e-03   3.435  0.00061 ***
## YearsWithCurrManager          -1.092e-02  4.019e-03  -2.718  0.00666 **
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.33 on 1448 degrees of freedom
## Multiple R-squared:  0.207,  Adjusted R-squared:  0.1955
## F-statistic:    18 on 21 and 1448 DF,  p-value: < 2.2e-16

coefficients(x)

##                     (Intercept)                              ï..Age
##                    8.340952e-01                        -3.162131e-03
## BusinessTravelTravel_Frequently     BusinessTravelTravel_Rarely
##                    1.513585e-01                         6.511584e-02
```

```
##                       DailyRate                DistanceFromHome
##                  -2.790598e-05                    3.460081e-03
##          EnvironmentSatisfaction                 MaritalStatus1
##                  -4.029278e-02                   -1.102275e-01
##                  MaritalStatus2                     HourlyRate
##                  -1.348629e-01                   -2.169636e-04
##                  JobInvolvement                       JobLevel
##                  -6.228668e-02                   -2.387418e-02
##                 JobSatisfaction                  MonthlyIncome
##                  -4.032920e-02                   -3.524515e-07
##                       OverTime1                PercentSalaryHike
##                   2.024277e-01                   -1.673733e-03
##                   StandardHours                TotalWorkingYears
##                             NA                   -1.479393e-03
##                 WorkLifeBalance                  YearsAtCompany
##                  -2.902711e-02                    2.603135e-03
##              YearsInCurrentRole           YearsSinceLastPromotion
##                  -9.064494e-03                    1.186648e-02
##             YearsWithCurrManager
##                  -1.092202e-02
```

```
confint(x,level=0.95)
```

```
##                                        2.5 %          97.5 %
## (Intercept)                     6.562756e-01   1.011915e+00
## ï..Age                         -5.764031e-03  -5.602314e-04
## BusinessTravelTravel_Frequently  8.544889e-02   2.172681e-01
## BusinessTravelTravel_Rarely      8.158859e-03   1.220728e-01
## DailyRate                       -7.016314e-05   1.435117e-05
## DistanceFromHome                 1.364512e-03   5.555650e-03
## EnvironmentSatisfaction         -5.584194e-02  -2.474362e-02
## MaritalStatus1                  -1.497255e-01  -7.072952e-02
## MaritalStatus2                  -1.819177e-01  -8.780814e-02
## HourlyRate                      -1.054670e-03   6.207427e-04
## JobInvolvement                  -8.621223e-02  -3.836112e-02
## JobLevel                        -7.495230e-02   2.720393e-02
## JobSatisfaction                 -5.574372e-02  -2.491468e-02
## MonthlyIncome                   -1.215266e-05   1.144776e-05
## OverTime1                        1.646890e-01   2.401664e-01
## PercentSalaryHike               -6.312332e-03   2.964866e-03
## StandardHours                             NA             NA
## TotalWorkingYears               -6.104789e-03   3.146003e-03
## WorkLifeBalance                 -5.309978e-02  -4.954450e-03
## YearsAtCompany                  -3.145522e-03   8.351792e-03
## YearsInCurrentRole              -1.674191e-02  -1.387078e-03
## YearsSinceLastPromotion          5.089351e-03   1.864361e-02
## YearsWithCurrManager            -1.880587e-02  -3.038171e-03
```

```
# Predicted Values
fitted(x)
```

```
##            1            2            3            4            5
##   0.3111588999  0.1088964172  0.3793985321  0.3144159878  0.2253711977
##            6            7            8            9           10
##   0.1448865005  0.2188562052  0.0834714682  0.1950318406  0.0900237044
##           11           12           13           14           15
##   0.1243176550  0.3597485848  0.2735026265  0.0784328548  0.5315178089
##           16           17           18           19           20
##   0.0820002774  0.3154608474  0.1600552155 -0.0577612664  0.2990033452
##           21           22           23           24           25
##   0.0380092819  0.2665637077  0.1647833301  0.2490906171  0.2963090395
##           26           27           28           29           30
##  -0.2253646186  0.7505317121  0.0809190839 -0.0192496627  0.1783704651
##           31           32           33           34           35
##   0.1429540363  0.0980954566  0.2094957527 -0.0770425620  0.3648419845
##           36           37           38           39           40
##  -0.1049756472  0.3429867784 -0.0174171019  0.4278622276  0.1046317662
##           41           42           43           44           45
##   0.0386338614  0.1233518167  0.5190283006  0.1090965683  0.1176655981
##           46           47           48           49           50
##   0.0083114529  0.1842653551  0.2059972158  0.3051387087 -0.0611066104
##           51           52           53           54           55
##   0.4149493599  0.4319158526  0.2716626670  0.3227872667  0.3721552098
##           56           57           58           59           60
##   0.3331763637  0.1722428014  0.4194457516 -0.1168185335  0.0127686609
##           61           62           63           64           65
##   0.2456011314  0.2656716557  0.3327768550  0.1723394650 -0.0342622153
##           66           67           68           69           70
##   0.0699245895  0.3396764819  0.0633647890  0.2924128606  0.3640372980
##           71           72           73           74           75
##   0.2765315573  0.0360459575  0.2308134822  0.0247452104  0.0523367516
##           76           77           78           79           80
##   0.0242730611  0.1517311781  0.2238663285  0.1757717258  0.2201337034
##           81           82           83           84           85
##   0.2638640561  0.2101693010  0.0049910579  0.1306974278  0.1296798659
##           86           87           88           89           90
##   0.0640107220  0.1839522339 -0.0888354209  0.0496658165  0.0653061638
##           91           92           93           94           95
##   0.2071632692  0.3535933482  0.2681475675  0.4337673123  0.1388419689
##           96           97           98           99          100
##   0.0313016956  0.1496215495 -0.0167208440 -0.0519242562  0.0579210680
##          101          102          103          104          105
##   0.2952534074  0.2420077966  0.5305885089  0.0915630096 -0.0799887838
##          106          107          108          109          110
##  -0.2101703938  0.2283662935  0.4392219937  0.1040288485  0.2865275676
##          111          112          113          114          115
##   0.3555829685  0.5523307159  0.1204276004  0.1791587661  0.1362785841
##          116          117          118          119          120
##   0.0372444545  0.1820163099  0.0057605333  0.0817017005  0.1296876387
##          121          122          123          124          125
##   0.2790955933 -0.0555989555  0.3250109687  0.0143556783  0.4323718574
```

```
##              126            127            128            129            130
##     0.2374659258   0.0646908663   0.5087590643   0.0882466558   0.0445369274
##              131            132            133            134            135
##     0.2736802595   0.1563884270   0.4963985085   0.0787553675   0.0914252455
##              136            137            138            139            140
##     0.0972721126   0.2897033820  -0.0886627783   0.2973895631   0.2031148635
##              141            142            143            144            145
##     0.2639498396   0.1527822331   0.2993736255   0.3093774242   0.0425972004
##              146            147            148            149            150
##     0.1188073914   0.2306715809   0.1438254400   0.1199240848   0.3175230235
##              151            152            153            154            155
##     0.1008726006  -0.0553402758   0.2260271137  -0.0518181271   0.1583047741
##              156            157            158            159            160
##    -0.1926583119   0.1081548485   0.3778126236  -0.1015328721   0.1436762348
##              161            162            163            164            165
##     0.0977595793   0.0810039955   0.1760364155   0.1163975666   0.2758180389
##              166            167            168            169            170
##     0.0496371741   0.0341415474   0.0203630529   0.1196207861   0.1649792687
##              171            172            173            174            175
##     0.4102747752   0.4894134591   0.3021116422   0.0095840280   0.1950038379
##              176            177            178            179            180
##     0.2531506680   0.1161468858   0.3547735191   0.0863792878   0.1514358315
##              181            182            183            184            185
##     0.2505801702   0.2477791341   0.4756612487   0.0921901964  -0.0423499517
##              186            187            188            189            190
##     0.0209703795  -0.1098725501  -0.2078037404   0.0339113213   0.0076599592
##              191            192            193            194            195
##    -0.1042922883   0.1719946758   0.4289806978  -0.2255469774  -0.0219783201
##              196            197            198            199            200
##     0.3324987041   0.3396345849  -0.0390533551  -0.0262382184  -0.0143902490
##              201            202            203            204            205
##     0.3151268087  -0.0307800798   0.3096346735   0.1619965052   0.4241721893
##              206            207            208            209            210
##     0.0703276475   0.2575403780   0.2734423147  -0.0058134631  -0.0594545043
##              211            212            213            214            215
##     0.0916417572   0.0458346128   0.1522538995   0.0709711338   0.3907168218
##              216            217            218            219            220
##     0.2274394788   0.5050884551   0.1744231812   0.0488650417  -0.0441880130
##              221            222            223            224            225
##    -0.0015378912   0.1913050595   0.1924557156  -0.0236820883   0.0579162608
##              226            227            228            229            230
##     0.0389505553   0.1044081502   0.0830117086   0.0493581806   0.4836378018
##              231            232            233            234            235
##     0.1506259101  -0.2207854318   0.0680654637  -0.2355972539   0.2768914769
##              236            237            238            239            240
##    -0.0623844003   0.1043791090   0.3027407797   0.0956057250   0.4654923270
##              241            242            243            244            245
##    -0.0108301662   0.0137750102   0.1489771171   0.0268622681  -0.1741422173
##              246            247            248            249            250
##     0.1136854084   0.1158401697   0.0611451878   0.1882844240   0.0855292824
```

```
##           251           252           253           254           255
##   0.1895500122  0.2165841455  0.1338751976  0.3277981183 -0.0197244636
##           256           257           258           259           260
##   0.1509508120  0.3148121774 -0.1026378604  0.0178701131  0.4141282102
##           261           262           263           264           265
##   0.2060142314 -0.0821373486  0.2402045019  0.2995359354  0.3576111492
##           266           267           268           269           270
##   0.2242217165  0.1817295036  0.0106205817  0.0784945454 -0.0972270793
##           271           272           273           274           275
##   0.1298468089  0.3348765059 -0.0078252577 -0.0380357866  0.2144979813
##           276           277           278           279           280
##   0.1192052398  0.0926033215  0.3611609774  0.1410344221 -0.0437188665
##           281           282           283           284           285
##   0.1131769438 -0.0039591765  0.1619817726  0.1347152486  0.5621575483
##           286           287           288           289           290
## -0.0096529271  0.3765620966 -0.0205502600  0.4088003670  0.0928241813
##           291           292           293           294           295
##   0.4098426635  0.2428756244  0.1952453457  0.3772246363  0.4002812616
##           296           297           298           299           300
##   0.1138520820  0.2725980503  0.0346573987  0.1132632319  0.0565742371
##           301           302           303           304           305
## -0.0102532817  0.3010680493  0.1752655405  0.0188842378 -0.2031305745
##           306           307           308           309           310
## -0.0107371991  0.0312720920  0.1916104560  0.1589537066  0.2241932646
##           311           312           313           314           315
##   0.3047280379  0.1505115204  0.2948636537  0.1081453836  0.2811802015
##           316           317           318           319           320
##   0.1385550115  0.2218769487  0.1478892852  0.4571149927  0.3442666681
##           321           322           323           324           325
##   0.2705343927 -0.1405504030  0.0388816115  0.4746478262 -0.0756251434
##           326           327           328           329           330
##   0.1265633489  0.1640519184  0.2152018312  0.3247208131 -0.1335796573
##           331           332           333           334           335
##   0.1119317073  0.2115163498  0.1755205356  0.1197350513 -0.0800169447
##           336           337           338           339           340
##   0.3277094737  0.4854826049  0.2899097304  0.0185721196  0.0414362426
##           341           342           343           344           345
## -0.0840496843  0.1216939065  0.2293361767  0.2494429669  0.0046339702
##           346           347           348           349           350
##   0.1194743766  0.3851421661  0.2291558590  0.1926496780 -0.0394012798
##           351           352           353           354           355
##   0.2510100829  0.0593967490  0.1924733132  0.1838994307  0.2100228851
##           356           357           358           359           360
##   0.0300989940  0.1948816839  0.6819677305  0.0109935569  0.0489342573
##           361           362           363           364           365
## -0.0905672667  0.0674579941  0.2410374277  0.3958310769  0.0847491990
##           366           367           368           369           370
## -0.0614239749  0.3295905519  0.0229804381  0.3660380189  0.5340015216
##           371           372           373           374           375
##   0.2638687605  0.1625392762  0.2612616817  0.0080463481  0.1072343945
```

```
##           376          377          378          379          380
##    0.1541097414 -0.1189143547  0.0295181692  0.2999047397  0.1201465770
##           381          382          383          384          385
##    0.1707820524  0.1505529694  0.3101127499  0.2829771658  0.1914247711
##           386          387          388          389          390
##    0.4640839137  0.0663434080 -0.0279732285  0.1354341108  0.4214808316
##           391          392          393          394          395
##    0.0528764175  0.1110091511  0.0706018548 -0.0441034699  0.1174034898
##           396          397          398          399          400
##    0.1032406277  0.1739497990  0.4172453946  0.2547272557  0.2061997136
##           401          402          403          404          405
##    0.1602171191 -0.0038836598  0.2253330127 -0.0530053612  0.1123511554
##           406          407          408          409          410
##    0.2361075939  0.1199667562  0.1078762827 -0.1539570299  0.2071352332
##           411          412          413          414          415
##    0.2167990445  0.1370833223 -0.0917054938  0.0673599646  0.4737973076
##           416          417          418          419          420
##    0.2889422866  0.2554451867 -0.2858730126  0.1887306983 -0.0182989280
##           421          422          423          424          425
##    0.0574392564  0.2423692881  0.3350923033  0.0548026964  0.1169067577
##           426          427          428          429          430
##    0.1813791588  0.0712327039  0.1448547165 -0.0259911076  0.0507996480
##           431          432          433          434          435
##    0.3512428963  0.1229273497  0.0283898678  0.1858067483 -0.1122566652
##           436          437          438          439          440
##    0.2383856607  0.2226460721  0.2143322046  0.1769508599  0.2716391780
##           441          442          443          444          445
##    0.4446588150  0.1679334288  0.1591954244  0.3357075355 -0.0228970643
##           446          447          448          449          450
##    0.0999022802 -0.0621314783  0.0004806994  0.0504790175  0.1027334091
##           451          452          453          454          455
##    0.2549152341  0.2664091285 -0.0981186713  0.4702156899 -0.0023870603
##           456          457          458          459          460
##   -0.0762428214  0.0371717491  0.6136940591  0.1774524565  0.3007279128
##           461          462          463          464          465
##    0.2346768774  0.1943300794  0.0433393312  0.6477906661  0.0455535694
##           466          467          468          469          470
##    0.1802741549  0.0003560962  0.0744563046  0.1249862792 -0.1078601163
##           471          472          473          474          475
##    0.2117448156  0.0223696635  0.1457934951  0.0332321045  0.2647314351
##           476          477          478          479          480
##    0.2074838618  0.2164198589  0.1650084125  0.1164128323  0.4608138518
##           481          482          483          484          485
##    0.3781352932  0.3023167969  0.2241883101  0.3170886129 -0.0768306401
##           486          487          488          489          490
##    0.2186845506  0.2473982831  0.2666388757 -0.0039246045  0.2411107553
##           491          492          493          494          495
##    0.2918711212  0.1906152094  0.0598230784  0.2018660223  0.2498969812
##           496          497          498          499          500
##    0.1032944718  0.2767763749 -0.0157308557  0.1993315235  0.0533006910
```

```
##           501           502           503           504           505
##   0.2826650098  0.1734711631  0.0644891008  0.0423226506  0.3515438754
##           506           507           508           509           510
##   0.2475888579 -0.0112821525  0.1385296697  0.2625552143  0.0202289048
##           511           512           513           514           515
##   0.0572345264  0.3546154702  0.3075958693  0.4313734044  0.6197340692
##           516           517           518           519           520
##   0.0875404402  0.1557289684  0.0120876318  0.0580491088  0.1612799546
##           521           522           523           524           525
##   0.0122186697  0.0994243936  0.0492635956  0.1168240054  0.1426842859
##           526           527           528           529           530
##   0.2971358166  0.1728223144  0.0180386702  0.3072965850  0.0006476435
##           531           532           533           534           535
##   0.0177589147  0.0613229772  0.0858736252  0.1984838015 -0.1691603350
##           536           537           538           539           540
##   0.1089127492  0.2602416925  0.1104568129 -0.1230157681  0.0549551182
##           541           542           543           544           545
##   0.5661610052 -0.0159364393  0.3078249458  0.3472288224  0.2368459841
##           546           547           548           549           550
##   0.0614140041  0.2237739439  0.3031323618  0.1235255239  0.2315003538
##           551           552           553           554           555
##   0.2031359502  0.0536890023 -0.1235348044  0.3535420932  0.2359284560
##           556           557           558           559           560
##   0.0809421665  0.0114273816 -0.0454321339  0.1871800336  0.2887796817
##           561           562           563           564           565
##   0.1947157980 -0.0899261602  0.2837379558  0.1926026950  0.2731836768
##           566           567           568           569           570
##   0.2448212002  0.4320467815  0.0235048677  0.0912483610  0.1492412675
##           571           572           573           574           575
##  -0.0897567422  0.3439762440  0.1842463971  0.3066097059  0.1011081136
##           576           577           578           579           580
##   0.2278098349  0.1247851862  0.3492703507  0.4317275857  0.3004121218
##           581           582           583           584           585
##   0.1449662620  0.1266108947  0.0028480806  0.1151553999  0.1121450868
##           586           587           588           589           590
##   0.3325850206  0.1556883105 -0.0808352686 -0.1336010120  0.4983461999
##           591           592           593           594           595
##  -0.0560158444  0.3616245044  0.1279067709 -0.0074536267 -0.0474063017
##           596           597           598           599           600
##   0.2008805945  0.0619200308  0.1704777843  0.2346138949  0.1007643910
##           601           602           603           604           605
##   0.0145930877  0.4250704213  0.4030966133  0.2759794506  0.1637973175
##           606           607           608           609           610
##   0.3647329527  0.3117233832 -0.1156721956  0.1010865659  0.1087195463
##           611           612           613           614           615
##   0.1355347750  0.0149250368  0.3269101359  0.0564687694  0.3481832893
##           616           617           618           619           620
##   0.0153711739 -0.0477288683  0.1600198383  0.3367105138 -0.0159310470
##           621           622           623           624           625
##   0.4083240174  0.1034532109  0.0847952593  0.1878973566  0.1932219412
```

```
##           626           627           628           629           630
##    0.1709556116  0.0108123956  0.0288963952  0.0925406175  0.1076556041
##           631           632           633           634           635
##    0.1020993833  0.2181859970  0.4410887734  0.2334480118  0.3286975300
##           636           637           638           639           640
##    0.0656450660  0.4500557144 -0.0812584193  0.1721266904  0.0631369854
##           641           642           643           644           645
##    0.1566662966  0.2269702300  0.2107440105  0.0920956333  0.1796775542
##           646           647           648           649           650
##    0.3491535012 -0.0239688765  0.0530210161  0.1406199651 -0.0852917793
##           651           652           653           654           655
##    0.0639319839  0.1514738862  0.3653566506  0.0975354648 -0.0634245470
##           656           657           658           659           660
##    0.1826513591  0.5653160247  0.1302640018  0.4280285984  0.1998590930
##           661           662           663           664           665
##    0.2872776975  0.1273745114  0.3097322252  0.2182606140  0.1371718398
##           666           667           668           669           670
##    0.3202476420  0.2839876189  0.3443916474  0.0719199442  0.3422243557
##           671           672           673           674           675
##    0.2539913546  0.1879825840  0.1844711507  0.4884468099  0.1832822817
##           676           677           678           679           680
##    0.1829557493  0.1616189033  0.0560509244  0.0549149104 -0.0092977493
##           681           682           683           684           685
##    0.1934847425 -0.1086104953  0.0851176614  0.4791747675  0.2271881836
##           686           687           688           689           690
##    0.2853646825  0.1873621823  0.0430103775  0.5667318582  0.4178214107
##           691           692           693           694           695
##    0.2877270119  0.3338346484  0.1136926796  0.1882506359  0.2045077124
##           696           697           698           699           700
##    0.2956764529 -0.0959845657  0.1619068159  0.0953133140 -0.2024538690
##           701           702           703           704           705
##    0.0748274465 -0.0617895218  0.0162230030  0.2566849855 -0.2337654848
##           706           707           708           709           710
##    0.0142829706  0.3047951955  0.0954408995 -0.1257294710  0.4897174552
##           711           712           713           714           715
##    0.0939378603  0.5235049636  0.2048557103 -0.1138045732 -0.2333758476
##           716           717           718           719           720
##    0.2776969116 -0.1535449940  0.1785675944  0.1481932437  0.1817618847
##           721           722           723           724           725
##    0.4537542741  0.0391204421  0.1663349202 -0.1805724982  0.1351597990
##           726           727           728           729           730
##    0.4212656128  0.1761192766  0.2054355908 -0.1422814657  0.3685697989
##           731           732           733           734           735
##    0.2597447803  0.5626539084  0.3772492920 -0.1268411578  0.4077933767
##           736           737           738           739           740
##    0.2563352075  0.0135650215  0.1283604581 -0.0065295729  0.1016235049
##           741           742           743           744           745
##    0.0858490773 -0.1146190518  0.0860724510  0.2272673302  0.3585793181
##           746           747           748           749           750
##    0.3268585886 -0.1105151165  0.3422624535  0.4563877498 -0.0102878033
```

```
##           751           752           753           754           755
##    0.0161094488 -0.2682966993  0.1825278818  0.4294288714  0.2128638818
##           756           757           758           759           760
##   -0.1594316335  0.1350443960 -0.0726804344  0.1215176980  0.2594108681
##           761           762           763           764           765
##    0.0666458763  0.1766302266  0.5486848381  0.2822194453  0.1113506961
##           766           767           768           769           770
##    0.1324781168  0.1703386324  0.1809546420  0.2191622991  0.2700649486
##           771           772           773           774           775
##   -0.1945589762  0.0897417915  0.1064442201  0.1327721437  0.0811020568
##           776           777           778           779           780
##    0.0710948047  0.4403237419  0.4453931860  0.1350432514  0.2372923392
##           781           782           783           784           785
##    0.2378870553  0.3037911387  0.1948664009 -0.0551263516  0.0268389425
##           786           787           788           789           790
##    0.1294305521  0.2189715275 -0.0120312543  0.0709166779  0.0960864993
##           791           792           793           794           795
##   -0.0153209790  0.2803541351  0.3854581059  0.2225141533  0.2792989502
##           796           797           798           799           800
##    0.2397474822  0.1477155785  0.2373298225  0.6342763622  0.0834607111
##           801           802           803           804           805
##    0.3462134294  0.3525549515  0.1299485528  0.0425026838 -0.0544935375
##           806           807           808           809           810
##   -0.0727845266  0.1573712447  0.1835717444 -0.0072213128 -0.0694221986
##           811           812           813           814           815
##   -0.0608661520  0.1464448146  0.1753009530  0.1448091645  0.0495631372
##           816           817           818           819           820
##    0.4565284179  0.1234560941  0.0221722985  0.1308978913  0.2575861564
##           821           822           823           824           825
##    0.0345821716 -0.0280118891  0.2020457484  0.1933797451  0.3559551236
##           826           827           828           829           830
##    0.3288555492  0.0112271457  0.4258893165  0.2201703080  0.5144761805
##           831           832           833           834           835
##    0.3225621983  0.2434384626  0.1102267958  0.1547941022  0.0691520350
##           836           837           838           839           840
##    0.2042417821  0.1708716057  0.1387107963  0.4889660447  0.1805190108
##           841           842           843           844           845
##    0.0446567323  0.2690496781  0.3075901980 -0.0702719552  0.1078308606
##           846           847           848           849           850
##    0.4590061726  0.0406933530  0.2261421337  0.1268139715  0.3366025881
##           851           852           853           854           855
##    0.0854395687 -0.0834025155 -0.0440047542  0.3308493006  0.3087018350
##           856           857           858           859           860
##   -0.0821998430  0.3902135602  0.3351775023 -0.2488392833  0.4403257070
##           861           862           863           864           865
##    0.4343830318 -0.0088089650  0.2477870482  0.0810948660  0.2489044446
##           866           867           868           869           870
##    0.1419740512  0.1972281534  0.0054481853  0.2223740324 -0.0940643842
##           871           872           873           874           875
##    0.2380119663  0.2204042672  0.2285501867  0.0729849200  0.0461718995
```

```
##           876           877           878           879           880
##    0.0516294703  0.2044274226 -0.0887047621 -0.1319920148 -0.0262833018
##           881           882           883           884           885
##    0.3135761101  0.2857277523  0.3448353278  0.0391810696  0.1517747574
##           886           887           888           889           890
##    0.1522559525  0.1815810963  0.5227344197  0.1424856679  0.4714365747
##           891           892           893           894           895
##   -0.0608676450 -0.0016753781  0.5402036594  0.0762842518 -0.3376787458
##           896           897           898           899           900
##    0.3510528929  0.2330971637  0.0643518905 -0.1204989338  0.0176875058
##           901           902           903           904           905
##    0.1007729334  0.1108485747  0.1110204727  0.2383952384 -0.0289978015
##           906           907           908           909           910
##   -0.1149952769  0.0918657866 -0.0983942517 -0.0033752516  0.4753553696
##           911           912           913           914           915
##    0.0720826660  0.6930426052  0.3855802614  0.3074186226  0.2956051058
##           916           917           918           919           920
##    0.5497345489 -0.0908556374  0.4360692158  0.2052853121 -0.0036656559
##           921           922           923           924           925
##    0.1035336677  0.4641069183 -0.0631622193  0.1138108121  0.2879689351
##           926           927           928           929           930
##    0.2522097532  0.0377924642  0.2440934923 -0.0066375381  0.3859092813
##           931           932           933           934           935
##    0.3897445534  0.2424968594  0.2926044978  0.2609196926  0.2629618965
##           936           937           938           939           940
##   -0.1756124129  0.2712034352  0.4130252475  0.1237599992  0.0047134100
##           941           942           943           944           945
##    0.2963327288  0.1752306417 -0.0879093470  0.1022969897  0.0501646374
##           946           947           948           949           950
##    0.2313849494  0.4678576074  0.3485119238  0.3215634016  0.1930960739
##           951           952           953           954           955
##    0.1278252326  0.3361018334  0.4512556019  0.1513551503  0.0312265867
##           956           957           958           959           960
##   -0.0590500981  0.0014425410  0.0149690019 -0.1259122221  0.0616559612
##           961           962           963           964           965
##    0.0857319102  0.4319274796  0.0350484518  0.0199938925  0.2609516277
##           966           967           968           969           970
##    0.0948887030  0.2211642894  0.0901233103  0.1663355967 -0.1227516883
##           971           972           973           974           975
##    0.0129612610  0.0868571111  0.0532207906 -0.0127311155  0.3063258935
##           976           977           978           979           980
##    0.2482774128  0.1401876708  0.1722049210 -0.0768490758  0.1574573837
##           981           982           983           984           985
##    0.2822031666  0.3883176442  0.0149526147 -0.0442509083  0.2535034228
##           986           987           988           989           990
##    0.3247835697  0.3102196370  0.1508723413  0.2917942534  0.2171626236
##           991           992           993           994           995
##    0.0809813753  0.3317975099 -0.0907065868  0.1477363757  0.2088550698
##           996           997           998           999          1000
##    0.4406505628  0.3037073020  0.4551457420  0.3152126810 -0.0487121147
```

```
##          1001          1002          1003          1004          1005
##   0.1248673646  0.2245790433  0.2431640682  0.1368669909  0.1251507438
##          1006          1007          1008          1009          1010
##   0.2776207152  0.4229067691  0.4171558541  0.0039486938 -0.0105389252
##          1011          1012          1013          1014          1015
##  -0.2760800204  0.4148953495  0.4671708620  0.0617013853  0.2482261011
##          1016          1017          1018          1019          1020
##   0.1348888516  0.4109392191  0.1838848998  0.2250439603  0.2362953603
##          1021          1022          1023          1024          1025
##   0.0582727629  0.3605360168  0.0472019215  0.1099505345 -0.1248211191
##          1026          1027          1028          1029          1030
##   0.1902532180 -0.0241831063  0.1216941871  0.2194131479 -0.1799366076
##          1031          1032          1033          1034          1035
##   0.0567321478 -0.0418944974  0.4932545297  0.1081777307  0.3110575372
##          1036          1037          1038          1039          1040
##   0.0922235627  0.4254349577  0.2211636347  0.0454181364  0.1712768439
##          1041          1042          1043          1044          1045
##  -0.0786235422  0.1762620085  0.1151827225 -0.0461700392  0.0591871424
##          1046          1047          1048          1049          1050
##  -0.0110093752  0.2092385064  0.1662732613  0.1516848832  0.0810735172
##          1051          1052          1053          1054          1055
##   0.2282384314  0.2223458948  0.0553381682 -0.1509145923 -0.1517539387
##          1056          1057          1058          1059          1060
##   0.1788472791  0.1864901553  0.4948954393  0.5401867251  0.0661659831
##          1061          1062          1063          1064          1065
##   0.6980392254  0.0918760929  0.4171776543  0.0632693264  0.0052168002
##          1066          1067          1068          1069          1070
##   0.1322639252  0.2168485311  0.2442813956  0.4886666248  0.2623225392
##          1071          1072          1073          1074          1075
##   0.3521006850  0.1282945146  0.1573520281  0.2443843665  0.3403342218
##          1076          1077          1078          1079          1080
##   0.0824248540 -0.1835446768  0.3695837006  0.0511417928  0.2132094459
##          1081          1082          1083          1084          1085
##  -0.0500103418  0.2362307745  0.3191312610  0.2673713781  0.2140685280
##          1086          1087          1088          1089          1090
##   0.3278970185  0.5611523759  0.2170713085  0.1490558965  0.0325635527
##          1091          1092          1093          1094          1095
##   0.1856895616  0.2878379229 -0.0263593186  0.2980583407  0.2360352244
##          1096          1097          1098          1099          1100
##   0.2780149759  0.2367932764  0.3085866378  0.0567574693  0.0522895239
##          1101          1102          1103          1104          1105
##   0.2409179558  0.1047031740  0.3295307721 -0.0185326979  0.0832650648
##          1106          1107          1108          1109          1110
##   0.2765364775  0.1943572106  0.1290263283  0.2732603491  0.1389830547
##          1111          1112          1113          1114          1115
##   0.4470191212 -0.1156665962  0.0423302133  0.0071692438  0.1986003741
##          1116          1117          1118          1119          1120
##   0.3319053091 -0.1145627931  0.0590892175  0.1504349898  0.0627579455
##          1121          1122          1123          1124          1125
##   0.2370322637  0.1813160628  0.3996013862  0.4202928934 -0.1088508652
```

```
##           1126          1127          1128          1129          1130
##    0.0815041516  0.1381656894  0.0271051543  0.3970915269  0.0067396465
##           1131          1132          1133          1134          1135
##    0.0715843779  0.2238520577  0.0988736840 -0.0027575069  0.1216451682
##           1136          1137          1138          1139          1140
##    0.0195573804  0.4290720671  0.4484630749  0.3039858820  0.0071442778
##           1141          1142          1143          1144          1145
##    0.0346003137  0.2840443983  0.4696453888  0.2248406333  0.2631778468
##           1146          1147          1148          1149          1150
##    0.2819919634  0.0749672079  0.1500338300  0.1253960303  0.1049292726
##           1151          1152          1153          1154          1155
##   -0.0331579043  0.3956581239  0.1871161406  0.5215921498 -0.0577553892
##           1156          1157          1158          1159          1160
##   -0.0364967009  0.1217059832 -0.1213368875  0.0836049220  0.3288328166
##           1161          1162          1163          1164          1165
##   -0.1515538167  0.1664978025  0.1376214884  0.2086988742  0.3416376714
##           1166          1167          1168          1169          1170
##    0.2934429488  0.0261810694  0.4574713371  0.5322853886  0.0681364609
##           1171          1172          1173          1174          1175
##    0.2311134916  0.5465932622  0.2493910502  0.1286295363 -0.0882547923
##           1176          1177          1178          1179          1180
##    0.0568666082  0.1055483960 -0.0826827574  0.2178661477 -0.0395439392
##           1181          1182          1183          1184          1185
##    0.2864512639  0.0372393800 -0.0130407926 -0.0927960187 -0.0894179206
##           1186          1187          1188          1189          1190
##   -0.0644631904  0.2939375521 -0.1627036462  0.3937680406 -0.0888235475
##           1191          1192          1193          1194          1195
##   -0.0154797860  0.1084428410  0.3040252602  0.3240647026 -0.1069638581
##           1196          1197          1198          1199          1200
##    0.0005310306  0.2958580827  0.2786915381  0.1324129699  0.1838334717
##           1201          1202          1203          1204          1205
##    0.1726884722  0.4214554628  0.0277985632 -0.0652702719  0.2488815686
##           1206          1207          1208          1209          1210
##    0.1901007797  0.0102861297  0.1986049858 -0.0693614765 -0.0472340456
##           1211          1212          1213          1214          1215
##   -0.0217146106  0.1762379218  0.1702849493  0.2323094181  0.0268478965
##           1216          1217          1218          1219          1220
##    0.5076368836  0.0754361013  0.0190061175  0.0632475051  0.0419529333
##           1221          1222          1223          1224          1225
##    0.1048730708  0.0053914180  0.2966965464  0.2922829939  0.1943061996
##           1226          1227          1228          1229          1230
##    0.2406696624  0.2863196904  0.0623995220  0.1118273466  0.3666419245
##           1231          1232          1233          1234          1235
##    0.2626781604  0.0589029132 -0.0570187194  0.1122686033  0.0594866678
##           1236          1237          1238          1239          1240
##    0.0737219727  0.3975181758  0.4068635813  0.3358390449  0.2405622275
##           1241          1242          1243          1244          1245
##    0.0056138661  0.2021671178  0.2109557262  0.0799310957  0.2471429207
##           1246          1247          1248          1249          1250
##    0.2679399607  0.2178976425  0.1156567211  0.1837477436  0.4442140951
```

```
##           1251          1252          1253          1254          1255
##     0.3071646404   0.0806886658   0.1518284297   0.0073610139  -0.0181202145
##           1256          1257          1258          1259          1260
##     0.5807810899   0.2354259977   0.1573507819   0.1918711598   0.0127380867
##           1261          1262          1263          1264          1265
##     0.0866243046   0.4217003395   0.4584321504   0.1007820299   0.0289054736
##           1266          1267          1268          1269          1270
##    -0.1230551372   0.0715870831  -0.0436900138   0.1811427171   0.0492544448
##           1271          1272          1273          1274          1275
##     0.2191518852   0.3721246677   0.0369981195   0.4090765296   0.2111467662
##           1276          1277          1278          1279          1280
##     0.0372057765   0.1858764275   0.0495268435   0.2017081347   0.3605710369
##           1281          1282          1283          1284          1285
##     0.0726866241   0.3760422070   0.0244185659  -0.0293541423   0.1058897254
##           1286          1287          1288          1289          1290
##     0.2651650826   0.1221285753   0.1263285351  -0.1780411460  -0.0474453572
##           1291          1292          1293          1294          1295
##     0.1640762182   0.1988450117   0.1092936408   0.2250709442   0.2097054761
##           1296          1297          1298          1299          1300
##     0.1652781713   0.1805171483   0.3421934592  -0.0380403801  -0.1026092977
##           1301          1302          1303          1304          1305
##    -0.0576958190  -0.1239645661   0.2365242091   0.2486078572   0.1503844072
##           1306          1307          1308          1309          1310
##    -0.1031459319   0.2805129931   0.1285384211   0.3258465131   0.1668073112
##           1311          1312          1313          1314          1315
##     0.2885672164   0.3098769283   0.1324574200   0.5609508701  -0.1482447163
##           1316          1317          1318          1319          1320
##     0.2342738393   0.0787835615   0.4026013253   0.0218212071   0.1624270535
##           1321          1322          1323          1324          1325
##     0.0354612397   0.2423084992  -0.1729913399  -0.0219296439   0.1708557079
##           1326          1327          1328          1329          1330
##     0.1296730572   0.5011478640  -0.1596585680   0.1672432941   0.1937094965
##           1331          1332          1333          1334          1335
##    -0.0675679620  -0.0141482106   0.5935456589  -0.0953723573   0.3542955230
##           1336          1337          1338          1339          1340
##    -0.0158051583  -0.0403864499   0.1704518419   0.2581003676   0.4512204823
##           1341          1342          1343          1344          1345
##     0.2435127317   0.0812594156   0.1739857478   0.2423632962   0.2168011329
##           1346          1347          1348          1349          1350
##     0.3610277404   0.0857195145   0.2302930583   0.0231714515   0.4618015134
##           1351          1352          1353          1354          1355
##     0.1128360509  -0.1186297752   0.0921728807   0.4377549072   0.2213378536
##           1356          1357          1358          1359          1360
##     0.2394848989   0.0301978711  -0.0156533458   0.1811949676   0.2497382554
##           1361          1362          1363          1364          1365
##     0.1227732386   0.0461768891   0.1973916312   0.1711558424   0.2654803580
##           1366          1367          1368          1369          1370
##     0.3971886169   0.2040426374   0.1815862129   0.3141521362   0.3711801277
##           1371          1372          1373          1374          1375
##    -0.1380110552   0.0919313365   0.2037649208   0.2266004877   0.1169080380
```

```
##            1376           1377           1378           1379           1380
##    0.4982294928  -0.0286319386  -0.0286419273   0.2409071712   0.4396260477
##            1381           1382           1383           1384           1385
##    0.2261218877   0.1712666782   0.2428075661   0.0178018983   0.1613155170
##            1386           1387           1388           1389           1390
## -0.0280804656   0.3031665749   0.2374755229  -0.0451144634   0.2605224817
##            1391           1392           1393           1394           1395
##    0.1385966979   0.3919812839   0.0751604643   0.0077094257   0.1301544523
##            1396           1397           1398           1399           1400
##    0.3515997735   0.5143495338   0.1180034959  -0.0301186749  -0.0380400312
##            1401           1402           1403           1404           1405
##    0.3196101139   0.0534443786   0.3138456835   0.2624130405   0.1003577340
##            1406           1407           1408           1409           1410
## -0.1154654068   0.3778845050   0.3091638947   0.1187916247   0.0909045795
##            1411           1412           1413           1414           1415
##    0.0127405667   0.1532334517  -0.0016480742   0.2257393556   0.1401771592
##            1416           1417           1418           1419           1420
##    0.1120924685  -0.1039356059   0.1346418123   0.2905070556   0.3085142198
##            1421           1422           1423           1424           1425
## -0.0497787906  -0.1294879850   0.2501345512   0.1467317748   0.0738832961
##            1426           1427           1428           1429           1430
##    0.3464924332   0.4456164272   0.1205184899   0.2334951146   0.1614587326
##            1431           1432           1433           1434           1435
## -0.0070072037  -0.0967790389   0.0607678518   0.2991583746   0.0406510123
##            1436           1437           1438           1439           1440
##    0.3316179434   0.5218375707  -0.0316212312   0.3189437313   0.0673011505
##            1441           1442           1443           1444           1445
##    0.0670738391  -0.2578636605   0.2943624081  -0.0461242415   0.0138586020
##            1446           1447           1448           1449           1450
##    0.1039018860   0.0399709847  -0.0043765507   0.0366185750   0.2260382784
##            1451           1452           1453           1454           1455
##    0.3300927552  -0.0101398273   0.0650798877   0.1404654879   0.1372329617
##            1456           1457           1458           1459           1460
##    0.2067861190   0.3316886044  -0.0145924372   0.1619828322   0.3075050433
##            1461           1462           1463           1464           1465
##    0.3974245918   0.3591124241   0.1535395602   0.1581261000   0.2312473107
##            1466           1467           1468           1469           1470
##    0.0488467000   0.0236654686   0.2716603595   0.0439633563   0.0019872194
```

`residuals`(x)

```
##               1              2              3              4              5
##    0.6888411001  -0.1088964172   0.6206014679  -0.3144159878  -0.2253711977
##               6              7              8              9             10
## -0.1448865005  -0.2188562052  -0.0834714682  -0.1950318406  -0.0900237044
##              11             12             13             14             15
## -0.1243176550  -0.3597485848  -0.2735026265  -0.0784328548   0.4684821911
##              16             17             18             19             20
## -0.0820002774  -0.3154608474  -0.1600552155   0.0577612664  -0.2990033452
##              21             22             23             24             25
```

```
##  -0.0380092819   0.7334362923  -0.1647833301  -0.2490906171   0.7036909605
##            26             27             28             29             30
##   0.2253646186   0.2494682879  -0.0809190839   0.0192496627  -0.1783704651
##            31             32             33             34             35
##  -0.1429540363  -0.0980954566  -0.2094957527   1.0770425620   0.6351580155
##            36             37             38             39             40
##   0.1049756472   0.6570132216   0.0174171019  -0.4278622276  -0.1046317662
##            41             42             43             44             45
##  -0.0386338614  -0.1233518167   0.4809716994  -0.1090965683  -0.1176655981
##            46             47             48             49             50
##   0.9916885471  -0.1842653551  -0.2059972158  -0.3051387087   0.0611066104
##            51             52             53             54             55
##   0.5850506401   0.5680841474  -0.2716626670  -0.3227872667  -0.3721552098
##            56             57             58             59             60
##  -0.3331763637  -0.1722428014  -0.4194457516   0.1168185335  -0.0127686609
##            61             62             63             64             65
##  -0.2456011314  -0.2656716557  -0.3327768550  -0.1723394650   0.0342622153
##            66             67             68             69             70
##  -0.0699245895  -0.3396764819  -0.0633647890  -0.2924128606   0.6359627020
##            71             72             73             74             75
##  -0.2765315573  -0.0360459575  -0.2308134822  -0.0247452104  -0.0523367516
##            76             77             78             79             80
##  -0.0242730611  -0.1517311781  -0.2238663285  -0.1757717258  -0.2201337034
##            81             82             83             84             85
##  -0.2638640561  -0.2101693010  -0.0049910579  -0.1306974278  -0.1296798659
##            86             87             88             89             90
##  -0.0640107220  -0.1839522339   0.0888354209  -0.0496658165   0.9346938362
##            91             92             93             94             95
##  -0.2071632692  -0.3535933482  -0.2681475675  -0.4337673123  -0.1388419689
##            96             97             98             99            100
##  -0.0313016956  -0.1496215495   0.0167208440   0.0519242562  -0.0579210680
##           101            102            103            104            105
##   0.7047465926  -0.2420077966   0.4694114911  -0.0915630096   0.0799887838
##           106            107            108            109            110
##   0.2101703938  -0.2283662935   0.5607780063  -0.1040288485  -0.2865275676
##           111            112            113            114            115
##  -0.3555829685   0.4476692841  -0.1204276004  -0.1791587661  -0.1362785841
##           116            117            118            119            120
##  -0.0372444545  -0.1820163099  -0.0057605333  -0.0817017005  -0.1296876387
##           121            122            123            124            125
##  -0.2790955933   0.0555989555   0.6749890313  -0.0143556783   0.5676281426
##           126            127            128            129            130
##  -0.2374659258   0.9353091337   0.4912409357  -0.0882466558  -0.0445369274
##           131            132            133            134            135
##  -0.2736802595  -0.1563884270   0.5036014915  -0.0787553675  -0.0914252455
##           136            137            138            139            140
##  -0.0972721126   0.7102966180   0.0886627783  -0.2973895631  -0.2031148635
##           141            142            143            144            145
##   0.7360501604  -0.1527822331  -0.2993736255  -0.3093774242  -0.0425972004
##           146            147            148            149            150
```

```
## -0.1188073914 -0.2306715809 -0.1438254400 -0.1199240848 -0.3175230235
##           151          152          153          154          155
## -0.1008726006  0.0553402758 -0.2260271137  0.0518181271 -0.1583047741
##           156          157          158          159          160
##  0.1926583119 -0.1081548485 -0.3778126236  0.1015328721 -0.1436762348
##           161          162          163          164          165
## -0.0977595793 -0.0810039955 -0.1760364155 -0.1163975666 -0.2758180389
##           166          167          168          169          170
## -0.0496371741 -0.0341415474 -0.0203630529 -0.1196207861 -0.1649792687
##           171          172          173          174          175
## -0.4102747752  0.5105865409 -0.3021116422 -0.0095840280 -0.1950038379
##           176          177          178          179          180
## -0.2531506680 -0.1161468858  0.6452264809 -0.0863792878 -0.1514358315
##           181          182          183          184          185
## -0.2505801702 -0.2477791341  0.5243387513 -0.0921901964  0.0423499517
##           186          187          188          189          190
## -0.0209703795  0.1098725501  0.2078037404 -0.0339113213 -0.0076599592
##           191          192          193          194          195
##  0.1042922883 -0.1719946758  0.5710193022  0.2255469774  0.0219783201
##           196          197          198          199          200
## -0.3324987041 -0.3396345849  0.0390533551  0.0262382184  0.0143902490
##           201          202          203          204          205
## -0.3151268087  0.0307800798 -0.3096346735 -0.1619965052  0.5758278107
##           206          207          208          209          210
##  0.9296723525 -0.2575403780 -0.2734423147  0.0058134631  0.0594545043
##           211          212          213          214          215
##  0.9083582428 -0.0458346128 -0.1522538995 -0.0709711338  0.6092831782
##           216          217          218          219          220
## -0.2274394788  0.4949115449  0.8255768188 -0.0488650417  0.0441880130
##           221          222          223          224          225
##  0.0015378912 -0.1913050595 -0.1924557156  0.0236820883 -0.0579162608
##           226          227          228          229          230
## -0.0389505553 -0.1044081502 -0.0830117086 -0.0493581806  0.5163621982
##           231          232          233          234          235
## -0.1506259101  0.2207854318 -0.0680654637  0.2355972539  0.7231085231
##           236          237          238          239          240
##  0.0623844003  0.8956208910 -0.3027407797 -0.0956057250  0.5345076730
##           241          242          243          244          245
##  0.0108301662 -0.0137750102 -0.1489771171 -0.0268622681  0.1741422173
##           246          247          248          249          250
## -0.1136854084 -0.1158401697 -0.0611451878 -0.1882844240 -0.0855292824
##           251          252          253          254          255
##  0.8104499878 -0.2165841455 -0.1338751976 -0.3277981183  0.0197244636
##           256          257          258          259          260
## -0.1509508120 -0.3148121774  0.1026378604 -0.0178701131  0.5858717898
##           261          262          263          264          265
## -0.2060142314  0.0821373486 -0.2402045019 -0.2995359354  0.6423888508
##           266          267          268          269          270
## -0.2242217165 -0.1817295036 -0.0106205817 -0.0784945454  0.0972270793
##           271          272          273          274          275
```

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## -0.1298468089  0.6651234941  0.0078252577  0.0380357866 -0.2144979813
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## -0.1192052398 -0.0926033215 -0.3611609774 -0.1410344221  0.0437188665
##          281           282           283           284           285
## -0.1131769438  0.0039591765 -0.1619817726 -0.1347152486 -0.5621575483
##          286           287           288           289           290
##  0.0096529271  0.6234379034  0.0205502600  0.5911996330 -0.0928241813
##          291           292           293           294           295
## -0.4098426635 -0.2428756244 -0.1952453457  0.6227753637 -0.4002812616
##          296           297           298           299           300
## -0.1138520820  0.7274019497 -0.0346573987 -0.1132632319 -0.0565742371
##          301           302           303           304           305
##  0.0102532817 -0.3010680493 -0.1752655405 -0.0188842378  0.2031305745
##          306           307           308           309           310
##  0.0107371991 -0.0312720920 -0.1916104560 -0.1589537066 -0.2241932646
##          311           312           313           314           315
## -0.3047280379 -0.1505115204 -0.2948636537 -0.1081453836 -0.2811802015
##          316           317           318           319           320
## -0.1385550115 -0.2218769487  0.8521107148 -0.4571149927 -0.3442666681
##          321           322           323           324           325
## -0.2705343927  0.1405504030 -0.0388816115  0.5253521738  0.0756251434
##          326           327           328           329           330
## -0.1265633489 -0.1640519184  0.7847981688 -0.3247208131  0.1335796573
##          331           332           333           334           335
## -0.1119317073 -0.2115163498 -0.1755205356 -0.1197350513  0.0800169447
##          336           337           338           339           340
## -0.3277094737  0.5145173951 -0.2899097304 -0.0185721196 -0.0414362426
##          341           342           343           344           345
##  0.0840496843 -0.1216939065 -0.2293361767 -0.2494429669 -0.0046339702
##          346           347           348           349           350
## -0.1194743766 -0.3851421661 -0.2291558590 -0.1926496780  0.0394012798
##          351           352           353           354           355
## -0.2510100829 -0.0593967490 -0.1924733132 -0.1838994307 -0.2100228851
##          356           357           358           359           360
## -0.0300989940 -0.1948816839  0.3180322695 -0.0109935569 -0.0489342573
##          361           362           363           364           365
##  0.0905672667 -0.0674579941 -0.2410374277  0.6041689231 -0.0847491990
##          366           367           368           369           370
##  0.0614239749  0.6704094481 -0.0229804381  0.6339619811 -0.5340015216
##          371           372           373           374           375
##  0.7361312395 -0.1625392762 -0.2612616817 -0.0080463481 -0.1072343945
##          376           377           378           379           380
## -0.1541097414  0.1189143547 -0.0295181692  0.7000952603 -0.1201465770
##          381           382           383           384           385
## -0.1707820524 -0.1505529694  0.6898872501 -0.2829771658 -0.1914247711
##          386           387           388           389           390
##  0.5359160863 -0.0663434080  0.0279732285 -0.1354341108 -0.4214808316
##          391           392           393           394           395
## -0.0528764175 -0.1110091511 -0.0706018548  0.0441034699 -0.1174034898
##          396           397           398           399           400
```

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##  -0.1032406277 -0.1739497990 -0.4172453946 -0.2547272557 -0.2061997136
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##  -0.1602171191  0.0038836598 -0.2253330127  0.0530053612 -0.1123511554
##            406           407           408           409           410
##   0.7638924061 -0.1199667562 -0.1078762827  0.1539570299 -0.2071352332
##            411           412           413           414           415
##  -0.2167990445 -0.1370833223  0.0917054938 -0.0673599646  0.5262026924
##            416           417           418           419           420
##   0.7110577134 -0.2554451867  0.2858730126 -0.1887306983  0.0182989280
##            421           422           423           424           425
##  -0.0574392564  0.7576307119  0.6649076967 -0.0548026964 -0.1169067577
##            426           427           428           429           430
##  -0.1813791588 -0.0712327039 -0.1448547165  0.0259911076 -0.0507996480
##            431           432           433           434           435
##  -0.3512428963 -0.1229273497 -0.0283898678 -0.1858067483  0.1122566652
##            436           437           438           439           440
##   0.7616143393  0.7773539279 -0.2143322046 -0.1769508599  0.7283608220
##            441           442           443           444           445
##   0.5553411850 -0.1679334288 -0.1591954244  0.6642924645  0.0228970643
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##  -0.0999022802  0.0621314783 -0.0004806994 -0.0504790175 -0.1027334091
##            451           452           453           454           455
##  -0.2549152341 -0.2664091285  0.0981186713  0.5297843101  0.0023870603
##            456           457           458           459           460
##   0.0762428214 -0.0371717491  0.3863059409 -0.1774524565 -0.3007279128
##            461           462           463           464           465
##  -0.2346768774 -0.1943300794 -0.0433393312  0.3522093339 -0.0455535694
##            466           467           468           469           470
##  -0.1802741549 -0.0003560962 -0.0744563046 -0.1249862792  1.1078601163
##            471           472           473           474           475
##  -0.2117448156 -0.0223696635 -0.1457934951 -0.0332321045 -0.2647314351
##            476           477           478           479           480
##  -0.2074838618 -0.2164198589 -0.1650084125 -0.1164128323  0.5391861482
##            481           482           483           484           485
##   0.6218647068 -0.3023167969  0.7758116899 -0.3170886129  0.0768306401
##            486           487           488           489           490
##  -0.2186845506 -0.2473982831 -0.2666388757  0.0039246045 -0.2411107553
##            491           492           493           494           495
##  -0.2918711212 -0.1906152094 -0.0598230784 -0.2018660223 -0.2498969812
##            496           497           498           499           500
##   0.8967055282 -0.2767763749  0.0157308557 -0.1993315235 -0.0533006910
##            501           502           503           504           505
##  -0.2826650098 -0.1734711631 -0.0644891008 -0.0423226506  0.6484561246
##            506           507           508           509           510
##  -0.2475888579  0.0112821525 -0.1385296697 -0.2625552143 -0.0202289048
##            511           512           513           514           515
##  -0.0572345264 -0.3546154702 -0.3075958693  0.5686265956  0.3802659308
##            516           517           518           519           520
##  -0.0875404402 -0.1557289684 -0.0120876318 -0.0580491088 -0.1612799546
##            521           522           523           524           525
```

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## -0.0122186697 -0.0994243936 -0.0492635956 -0.1168240054 -0.1426842859
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##  0.7028641834 -0.1728223144 -0.0180386702  0.6927034150 -0.0006476435
##           531           532           533           534           535
## -0.0177589147 -0.0613229772 -0.0858736252 -0.1984838015  0.1691603350
##           536           537           538           539           540
## -0.1089127492 -0.2602416925 -0.1104568129  0.1230157681 -0.0549551182
##           541           542           543           544           545
##  0.4338389948  0.0159364393 -0.3078249458 -0.3472288224 -0.2368459841
##           546           547           548           549           550
## -0.0614140041 -0.2237739439  0.6968676382 -0.1235255239 -0.2315003538
##           551           552           553           554           555
## -0.2031359502 -0.0536890023  0.1235348044 -0.3535420932 -0.2359284560
##           556           557           558           559           560
## -0.0809421665 -0.0114273816  0.0454321339 -0.1871800336 -0.2887796817
##           561           562           563           564           565
## -0.1947157980  0.0899261602  0.7162620442 -0.1926026950 -0.2731836768
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## -0.2448212002  0.5679532185 -0.0235048677  0.9087516390 -0.1492412675
##           571           572           573           574           575
##  0.0897567422 -0.3439762440 -0.1842463971  0.6933902941 -0.1011081136
##           576           577           578           579           580
## -0.2278098349 -0.1247851862 -0.3492703507 -0.4317275857 -0.3004121218
##           581           582           583           584           585
## -0.1449662620 -0.1266108947 -0.0028480806 -0.1151553999 -0.1121450868
##           586           587           588           589           590
##  0.6674149794 -0.1556883105  0.0808352686  0.1336010120  0.5016538001
##           591           592           593           594           595
##  0.0560158444  0.6383754956 -0.1279067709  0.0074536267  0.0474063017
##           596           597           598           599           600
##  0.7991194055 -0.0619200308 -0.1704777843  0.7653861051 -0.1007643910
##           601           602           603           604           605
## -0.0145930877 -0.4250704213 -0.4030966133 -0.2759794506 -0.1637973175
##           606           607           608           609           610
## -0.3647329527 -0.3117233832  1.1156721956  0.8989134341 -0.1087195463
##           611           612           613           614           615
## -0.1355347750 -0.0149250368 -0.3269101359 -0.0564687694  0.6518167107
##           616           617           618           619           620
## -0.0153711739  0.0477288683 -0.1600198383 -0.3367105138  0.0159310470
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## -0.4083240174 -0.1034532109 -0.0847952593 -0.1878973566 -0.1932219412
##           626           627           628           629           630
## -0.1709556116 -0.0108123956 -0.0288963952 -0.0925406175 -0.1076556041
##           631           632           633           634           635
## -0.1020993833 -0.2181859970 -0.4410887734 -0.2334480118 -0.3286975300
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##           641           642           643           644           645
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##           646           647           648           649           650
```

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##   0.6508464988   0.0239688765  -0.0530210161  -0.1406199651   0.0852917793
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## -0.0639319839  -0.1514738862  -0.3653566506  -0.0975354648   0.0634245470
##            656            657            658            659            660
## -0.1826513591   0.4346839753  -0.1302640018  -0.4280285984  -0.1998590930
##            661            662            663            664            665
##   0.7127223025  -0.1273745114   0.6902677748   0.7817393860  -0.1371718398
##            666            667            668            669            670
## -0.3202476420   0.7160123811   0.6556083526  -0.0719199442   0.6577756443
##            671            672            673            674            675
## -0.2539913546  -0.1879825840  -0.1844711507  -0.4884468099  -0.1832822817
##            676            677            678            679            680
## -0.1829557493  -0.1616189033  -0.0560509244  -0.0549149104   0.0092977493
##            681            682            683            684            685
## -0.1934847425   0.1086104953  -0.0851176614   0.5208252325  -0.2271881836
##            686            687            688            689            690
## -0.2853646825  -0.1873621823  -0.0430103775   0.4332681418   0.5821785893
##            691            692            693            694            695
## -0.2877270119  -0.3338346484  -0.1136926796   0.8117493641  -0.2045077124
##            696            697            698            699            700
##   0.7043235471   0.0959845657  -0.1619068159  -0.0953133140   0.2024538690
##            701            702            703            704            705
##   0.9251725535   0.0617895218  -0.0162230030  -0.2566849855   0.2337654848
##            706            707            708            709            710
## -0.0142829706   0.6952048045  -0.0954408995   0.1257294710   0.5102825448
##            711            712            713            714            715
## -0.0939378603   0.4764950364  -0.2048557103   0.1138045732   0.2333758476
##            716            717            718            719            720
## -0.2776969116   0.1535449940  -0.1785675944  -0.1481932437  -0.1817618847
##            721            722            723            724            725
##   0.5462457259  -0.0391204421  -0.1663349202   0.1805724982  -0.1351597990
##            726            727            728            729            730
##   0.5787343872  -0.1761192766  -0.2054355908   0.1422814657  -0.3685697989
##            731            732            733            734            735
## -0.2597447803   0.4373460916   0.6227507080   0.1268411578  -0.4077933767
##            736            737            738            739            740
## -0.2563352075  -0.0135650215  -0.1283604581   0.0065295729  -0.1016235049
##            741            742            743            744            745
## -0.0858490773   0.1146190518  -0.0860724510  -0.2272673302   0.6414206819
##            746            747            748            749            750
## -0.3268585886   0.1105151165  -0.3422624535   0.5436122502   1.0102878033
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## -0.0161094488   0.2682966993   0.8174721182  -0.4294288714  -0.2128638818
##            756            757            758            759            760
##   0.1594316335  -0.1350443960   0.0726804344  -0.1215176980  -0.2594108681
##            761            762            763            764            765
## -0.0666458763   0.8233697734   0.4513151619  -0.2822194453  -0.1113506961
##            766            767            768            769            770
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##            771            772            773            774            775
```

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##   0.1945589762 -0.0897417915 -0.1064442201 -0.1327721437 -0.0811020568
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## -0.0710948047  0.5596762581  0.5546068140 -0.1350432514  0.7627076608
##            781           782           783           784           785
##   0.7621129447 -0.3037911387 -0.1948664009  0.0551263516 -0.0268389425
##            786           787           788           789           790
## -0.1294305521 -0.2189715275  0.0120312543 -0.0709166779  0.9039135007
##            791           792           793           794           795
##   0.0153209790  0.7196458649  0.6145418941 -0.2225141533 -0.2792989502
##            796           797           798           799           800
## -0.2397474822  0.8522844215  0.7626701775  0.3657236378 -0.0834607111
##            801           802           803           804           805
##   0.6537865706  0.6474450485 -0.1299485528 -0.0425026838  0.0544935375
##            806           807           808           809           810
##   0.0727845266 -0.1573712447 -0.1835717444  0.0072213128  0.0694221986
##            811           812           813           814           815
##   0.0608661520 -0.1464448146 -0.1753009530  0.8551908355 -0.0495631372
##            816           817           818           819           820
## -0.4565284179 -0.1234560941 -0.0221722985 -0.1308978913 -0.2575861564
##            821           822           823           824           825
## -0.0345821716  0.0280118891 -0.2020457484 -0.1933797451 -0.3559551236
##            826           827           828           829           830
## -0.3288555492 -0.0112271457 -0.4258893165  0.7798296920  0.4855238195
##            831           832           833           834           835
## -0.3225621983  0.7565615374 -0.1102267958 -0.1547941022 -0.0691520350
##            836           837           838           839           840
## -0.2042417821  0.8291283943 -0.1387107963  0.5110339553 -0.1805190108
##            841           842           843           844           845
## -0.0446567323 -0.2690496781  0.6924098020  0.0702719552 -0.1078308606
##            846           847           848           849           850
## -0.4590061726 -0.0406933530 -0.2261421337 -0.1268139715  0.6633974119
##            851           852           853           854           855
## -0.0854395687  0.0834025155  0.0440047542 -0.3308493006 -0.3087018350
##            856           857           858           859           860
##   0.0821998430 -0.3902135602  0.6648224977  0.2488392833 -0.4403257070
##            861           862           863           864           865
##   0.5656169682  0.0088089650 -0.2477870482 -0.0810948660  0.7510955554
##            866           867           868           869           870
## -0.1419740512 -0.1972281534 -0.0054481853 -0.2223740324  0.0940643842
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## -0.2380119663  0.7795957328 -0.2285501867 -0.0729849200 -0.0461718995
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## -0.0516294703 -0.2044274226  0.0887047621  0.1319920148  0.0262833018
##            881           882           883           884           885
## -0.3135761101 -0.2857277523 -0.3448353278 -0.0391810696 -0.1517747574
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##            891           892           893           894           895
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```

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## -0.3510528929 -0.2330971637 -0.0643518905  0.1204989338 -0.0176875058
##          901          902          903          904          905
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##          906          907          908          909          910
##  0.1149952769 -0.0918657866  0.0983942517  0.0033752516 -0.4753553696
##          911          912          913          914          915
## -0.0720826660  0.3069573948 -0.3855802614  0.6925813774 -0.2956051058
##          916          917          918          919          920
##  0.4502654511  0.0908556374 -0.4360692158 -0.2052853121  0.0036656559
##          921          922          923          924          925
## -0.1035336677 -0.4641069183  0.0631622193 -0.1138108121 -0.2879689351
##          926          927          928          929          930
## -0.2522097532 -0.0377924642 -0.2440934923  1.0066375381 -0.3859092813
##          931          932          933          934          935
## -0.3897445534 -0.2424968594  0.7073955022 -0.2609196926 -0.2629618965
##          936          937          938          939          940
##  0.1756124129 -0.2712034352 -0.4130252475 -0.1237599992  0.9952865900
##          941          942          943          944          945
##  0.7036672712 -0.1752306417  0.0879093470 -0.1022969897 -0.0501646374
##          946          947          948          949          950
## -0.2313849494  0.5321423926  0.6514880762 -0.3215634016 -0.1930960739
##          951          952          953          954          955
## -0.1278252326 -0.3361018334  0.5487443981  0.8486448497 -0.0312265867
##          956          957          958          959          960
##  0.0590500981 -0.0014425410 -0.0149690019  0.1259122221 -0.0616559612
##          961          962          963          964          965
## -0.0857319102 -0.4319274796 -0.0350484518 -0.0199938925 -0.2609516277
##          966          967          968          969          970
## -0.0948887030  0.7788357106 -0.0901233103 -0.1663355967  0.1227516883
##          971          972          973          974          975
## -0.0129612610 -0.0868571111 -0.0532207906  0.0127311155 -0.3063258935
##          976          977          978          979          980
##  0.7517225872 -0.1401876708 -0.1722049210  0.0768490758 -0.1574573837
##          981          982          983          984          985
##  0.7177968334  0.6116823558 -0.0149526147  0.0442509083 -0.2535034228
##          986          987          988          989          990
##  0.6752164303 -0.3102196370 -0.1508723413 -0.2917942534 -0.2171626236
##          991          992          993          994          995
## -0.0809813753 -0.3317975099  0.0907065868 -0.1477363757 -0.2088550698
##          996          997          998          999         1000
## -0.4406505628 -0.3037073020  0.5448542580 -0.3152126810  0.0487121147
##         1001         1002         1003         1004         1005
## -0.1248673646 -0.2245790433 -0.2431640682 -0.1368669909 -0.1251507438
##         1006         1007         1008         1009         1010
## -0.2776207152  0.5770932309  0.5828441459 -0.0039486938  0.0105389252
##         1011         1012         1013         1014         1015
##  0.2760800204 -0.4148953495  0.5328291380 -0.0617013853 -0.2482261011
##         1016         1017         1018         1019         1020
## -0.1348888516  0.5890607809 -0.1838848998 -0.2250439603 -0.2362953603
##         1021         1022         1023         1024         1025
```

```
## -0.0582727629  0.6394639832 -0.0472019215 -0.1099505345  0.1248211191
##          1026          1027          1028          1029          1030
## -0.1902532180  0.0241831063 -0.1216941871 -0.2194131479  0.1799366076
##          1031          1032          1033          1034          1035
## -0.0567321478  1.0418944974  0.5067454703  0.8918222693 -0.3110575372
##          1036          1037          1038          1039          1040
## -0.0922235627  0.5745650423 -0.2211636347 -0.0454181364  0.8287231561
##          1041          1042          1043          1044          1045
##  0.0786235422 -0.1762620085 -0.1151827225  0.0461700392 -0.0591871424
##          1046          1047          1048          1049          1050
##  0.0110093752 -0.2092385064 -0.1662732613 -0.1516848832 -0.0810735172
##          1051          1052          1053          1054          1055
## -0.2282384314 -0.2223458948 -0.0553381682  0.1509145923  0.1517539387
##          1056          1057          1058          1059          1060
## -0.1788472791  0.8135098447  0.5051045607  0.4598132749 -0.0661659831
##          1061          1062          1063          1064          1065
##  0.3019607746 -0.0918760929 -0.4171776543 -0.0632693264 -0.0052168002
##          1066          1067          1068          1069          1070
## -0.1322639252 -0.2168485311 -0.2442813956  0.5113333752 -0.2623225392
##          1071          1072          1073          1074          1075
## -0.3521006850 -0.1282945146 -0.1573520281 -0.2443843665 -0.3403342218
##          1076          1077          1078          1079          1080
## -0.0824248540  0.1835446768  0.6304162994 -0.0511417928 -0.2132094459
##          1081          1082          1083          1084          1085
##  0.0500103418 -0.2362307745 -0.3191312610  0.7326286219 -0.2140685280
##          1086          1087          1088          1089          1090
##  0.6721029815 -0.5611523759 -0.2170713085 -0.1490558965 -0.0325635527
##          1091          1092          1093          1094          1095
## -0.1856895616 -0.2878379229  0.0263593186 -0.2980583407 -0.2360352244
##          1096          1097          1098          1099          1100
## -0.2780149759 -0.2367932764 -0.3085866378 -0.0567574693 -0.0522895239
##          1101          1102          1103          1104          1105
## -0.2409179558 -0.1047031740 -0.3295307721  0.0185326979 -0.0832650648
##          1106          1107          1108          1109          1110
## -0.2765364775  0.8056427894 -0.1290263283 -0.2732603491 -0.1389830547
##          1111          1112          1113          1114          1115
##  0.5529808788  1.1156665962  0.9576697867 -0.0071692438 -0.1986003741
##          1116          1117          1118          1119          1120
## -0.3319053091  0.1145627931 -0.0590892175 -0.1504349898 -0.0627579455
##          1121          1122          1123          1124          1125
## -0.2370322637 -0.1813160628 -0.3996013862 -0.4202928934  0.1088508652
##          1126          1127          1128          1129          1130
## -0.0815041516 -0.1381656894 -0.0271051543 -0.3970915269 -0.0067396465
##          1131          1132          1133          1134          1135
## -0.0715843779 -0.2238520577 -0.0988736840  0.0027575069 -0.1216451682
##          1136          1137          1138          1139          1140
## -0.0195573804  0.5709279329 -0.4484630749 -0.3039858820 -0.0071442778
##          1141          1142          1143          1144          1145
## -0.0346003137 -0.2840443983 -0.4696453888 -0.2248406333 -0.2631778468
##          1146          1147          1148          1149          1150
```

```
## -0.2819919634 -0.0749672079 -0.1500338300 -0.1253960303 -0.1049292726
##           1151           1152           1153           1154           1155
##  0.0331579043 -0.3956581239 -0.1871161406  0.4784078502  0.0577553892
##           1156           1157           1158           1159           1160
##  0.0364967009 -0.1217059832  0.1213368875 -0.0836049220 -0.3288328166
##           1161           1162           1163           1164           1165
##  0.1515538167 -0.1664978025  0.8623785116 -0.2086988742 -0.3416376714
##           1166           1167           1168           1169           1170
## -0.2934429488 -0.0261810694  0.5425286629 -0.5322853886 -0.0681364609
##           1171           1172           1173           1174           1175
## -0.2311134916  0.4534067378 -0.2493910502 -0.1286295363  0.0882547923
##           1176           1177           1178           1179           1180
## -0.0568666082 -0.1055483960  0.0826827574 -0.2178661477  0.0395439392
##           1181           1182           1183           1184           1185
## -0.2864512639 -0.0372393800  0.0130407926  0.0927960187  0.0894179206
##           1186           1187           1188           1189           1190
##  0.0644631904  0.7060624479  0.1627036462 -0.3937680406  0.0888235475
##           1191           1192           1193           1194           1195
##  0.0154797860 -0.1084428410 -0.3040252602 -0.3240647026  0.1069638581
##           1196           1197           1198           1199           1200
## -0.0005310306 -0.2958580827 -0.2786915381 -0.1324129699 -0.1838334717
##           1201           1202           1203           1204           1205
## -0.1726884722  0.5785445372 -0.0277985632  0.0652702719  0.7511184314
##           1206           1207           1208           1209           1210
##  0.8098992203 -0.0102861297 -0.1986049858  0.0693614765  0.0472340456
##           1211           1212           1213           1214           1215
##  0.0217146106 -0.1762379218 -0.1702849493  0.7676905819 -0.0268478965
##           1216           1217           1218           1219           1220
## -0.5076368836 -0.0754361013 -0.0190061175 -0.0632475051 -0.0419529333
##           1221           1222           1223           1224           1225
## -0.1048730708 -0.0053914180  0.7033034536  0.7077170061 -0.1943061996
##           1226           1227           1228           1229           1230
## -0.2406696624 -0.2863196904 -0.0623995220 -0.1118273466 -0.3666419245
##           1231           1232           1233           1234           1235
## -0.2626781604 -0.0589029132  0.0570187194 -0.1122686033 -0.0594866678
##           1236           1237           1238           1239           1240
## -0.0737219727  0.6024818242  0.5931364187 -0.3358390449 -0.2405622275
##           1241           1242           1243           1244           1245
## -0.0056138661 -0.2021671178 -0.2109557262 -0.0799310957 -0.2471429207
##           1246           1247           1248           1249           1250
## -0.2679399607  0.7821023575 -0.1156567211 -0.1837477436  0.5557859049
##           1251           1252           1253           1254           1255
## -0.3071646404 -0.0806886658 -0.1518284297 -0.0073610139  0.0181202145
##           1256           1257           1258           1259           1260
##  0.4192189101 -0.2354259977  0.8426492181 -0.1918711598 -0.0127380867
##           1261           1262           1263           1264           1265
## -0.0866243046 -0.4217003395  0.5415678496 -0.1007820299 -0.0289054736
##           1266           1267           1268           1269           1270
##  0.1230551372 -0.0715870831  0.0436900138 -0.1811427171 -0.0492544448
##           1271           1272           1273           1274           1275
```

```
## -0.2191518852  0.6278753323 -0.0369981195  0.5909234704 -0.2111467662
##          1276          1277          1278          1279          1280
## -0.0372057765 -0.1858764275 -0.0495268435 -0.2017081347  0.6394289631
##          1281          1282          1283          1284          1285
## -0.0726866241  0.6239577930 -0.0244185659  0.0293541423 -0.1058897254
##          1286          1287          1288          1289          1290
## -0.2651650826 -0.1221285753 -0.1263285351  0.1780411460  0.0474453572
##          1291          1292          1293          1294          1295
##  0.8359237818  0.8011549883 -0.1092936408 -0.2250709442 -0.2097054761
##          1296          1297          1298          1299          1300
## -0.1652781713 -0.1805171483  0.6578065408  1.0380403801  0.1026092977
##          1301          1302          1303          1304          1305
##  0.0576958190  0.1239645661 -0.2365242091 -0.2486078572 -0.1503844072
##          1306          1307          1308          1309          1310
##  0.1031459319 -0.2805129931 -0.1285384211 -0.3258465131 -0.1668073112
##          1311          1312          1313          1314          1315
## -0.2885672164 -0.3098769283  0.8675425800  0.4390491299  0.1482447163
##          1316          1317          1318          1319          1320
## -0.2342738393 -0.0787835615 -0.4026013253 -0.0218212071 -0.1624270535
##          1321          1322          1323          1324          1325
## -0.0354612397 -0.2423084992  0.1729913399  0.0219296439 -0.1708557079
##          1326          1327          1328          1329          1330
## -0.1296730572  0.4988521360  0.1596585680 -0.1672432941 -0.1937094965
##          1331          1332          1333          1334          1335
##  0.0675679620  0.0141482106  0.4064543411  1.0953723573 -0.3542955230
##          1336          1337          1338          1339          1340
##  0.0158051583  0.0403864499 -0.1704518419  0.7418996324  0.5487795177
##          1341          1342          1343          1344          1345
## -0.2435127317 -0.0812594156 -0.1739857478 -0.2423632962 -0.2168011329
##          1346          1347          1348          1349          1350
## -0.3610277404 -0.0857195145 -0.2302930583 -0.0231714515 -0.4618015134
##          1351          1352          1353          1354          1355
## -0.1128360509  0.1186297752 -0.0921728807  0.5622450928  0.7786621464
##          1356          1357          1358          1359          1360
## -0.2394848989 -0.0301978711  0.0156533458 -0.1811949676 -0.2497382554
##          1361          1362          1363          1364          1365
## -0.1227732386 -0.0461768891 -0.1973916312 -0.1711558424 -0.2654803580
##          1366          1367          1368          1369          1370
##  0.6028113831 -0.2040426374 -0.1815862129 -0.3141521362  0.6288198723
##          1371          1372          1373          1374          1375
##  0.1380110552 -0.0919313365 -0.2037649208 -0.2266004877 -0.1169080380
##          1376          1377          1378          1379          1380
##  0.5017705072  0.0286319386  0.0286419273 -0.2409071712  0.5603739523
##          1381          1382          1383          1384          1385
## -0.2261218877 -0.1712666782 -0.2428075661 -0.0178018983 -0.1613155170
##          1386          1387          1388          1389          1390
##  0.0280804656 -0.3031665749 -0.2374755229  0.0451144634 -0.2605224817
##          1391          1392          1393          1394          1395
##  0.8614033021 -0.3919812839 -0.0751604643 -0.0077094257 -0.1301544523
##          1396          1397          1398          1399          1400
```

```
##   0.6484002265   0.4856504662  -0.1180034959   0.0301186749   0.0380400312
##           1401           1402           1403           1404           1405
## -0.3196101139  -0.0534443786  -0.3138456835  -0.2624130405  -0.1003577340
##           1406           1407           1408           1409           1410
##   0.1154654068  -0.3778845050  -0.3091638947  -0.1187916247  -0.0909045795
##           1411           1412           1413           1414           1415
## -0.0127405667  -0.1532334517   0.0016480742  -0.2257393556  -0.1401771592
##           1416           1417           1418           1419           1420
## -0.1120924685   0.1039356059  -0.1346418123  -0.2905070556  -0.3085142198
##           1421           1422           1423           1424           1425
##   0.0497787906   0.1294879850  -0.2501345512  -0.1467317748  -0.0738832961
##           1426           1427           1428           1429           1430
## -0.3464924332  -0.4456164272  -0.1205184899  -0.2334951146  -0.1614587326
##           1431           1432           1433           1434           1435
##   0.0070072037   0.0967790389  -0.0607678518  -0.2991583746  -0.0406510123
##           1436           1437           1438           1439           1440
## -0.3316179434  -0.5218375707   0.0316212312   0.6810562687  -0.0673011505
##           1441           1442           1443           1444           1445
## -0.0670738391   0.2578636605   0.7056375919   0.0461242415   0.9861413980
##           1446           1447           1448           1449           1450
## -0.1039018860  -0.0399709847   0.0043765507  -0.0366185750  -0.2260382784
##           1451           1452           1453           1454           1455
## -0.3300927552   0.0101398273   0.9349201123  -0.1404654879  -0.1372329617
##           1456           1457           1458           1459           1460
## -0.2067861190  -0.3316886044   0.0145924372  -0.1619828322  -0.3075050433
##           1461           1462           1463           1464           1465
## -0.3974245918   0.6408875759  -0.1535395602  -0.1581261000  -0.2312473107
##           1466           1467           1468           1469           1470
## -0.0488467000  -0.0236654686  -0.2716603595  -0.0439633563  -0.0019872194
```

```
#Anova Table
anova(x)
```

```
## Analysis of Variance Table
##
## Response: Attrition
##                          Df  Sum Sq Mean Sq  F value     Pr(>F)
## ï..Age                    1   5.039  5.0386  46.2810  1.495e-11 ***
## BusinessTravel            2   3.150  1.5750  14.4672  6.011e-07 ***
## DailyRate                 1   0.560  0.5598   5.1418  0.0235033 *
## DistanceFromHome          1   1.219  1.2189  11.1958  0.0008408 ***
## EnvironmentSatisfaction   1   1.913  1.9135  17.5757  2.928e-05 ***
## MaritalStatus             2   4.838  2.4192  22.2215  3.122e-10 ***
## HourlyRate                1   0.004  0.0040   0.0366  0.8483270
## JobInvolvement            1   2.961  2.9613  27.2009  2.100e-07 ***
## JobLevel                  1   2.060  2.0600  18.9218  1.457e-05 ***
## JobSatisfaction           1   2.491  2.4912  22.8830  1.897e-06 ***
## MonthlyIncome             1   0.026  0.0256   0.2351  0.6278600
## OverTime                  1  12.738 12.7377 116.9998  < 2.2e-16 ***
## PercentSalaryHike         1   0.078  0.0783   0.7196  0.3964267
```

```
## TotalWorkingYears              1    0.260   0.2598    2.3864 0.1226173
## WorkLifeBalance                1    0.682   0.6816    6.2606 0.0124551 *
## YearsAtCompany                 1    0.245   0.2448    2.2490 0.1339161
## YearsInCurrentRole             1    0.849   0.8488    7.7965 0.0053035 **
## YearsSinceLastPromotion        1    1.231   1.2310   11.3072 0.0007922 ***
## YearsWithCurrManager           1    0.804   0.8040    7.3850 0.0066553 **
## Residuals                   1448 157.642   0.1089
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

vcov(x)

##                                    (Intercept)        ï..Age
## (Intercept)                       8.217447e-03 -4.587345e-05
## ï..Age                           -4.587345e-05  1.759376e-06
## BusinessTravelTravel_Frequently  -7.832938e-04  1.210830e-06
## BusinessTravelTravel_Rarely      -7.779041e-04  7.680367e-07
## DailyRate                        -3.236291e-07  5.822814e-10
## DistanceFromHome                 -8.923988e-06  2.003963e-08
## EnvironmentSatisfaction          -1.768855e-04 -2.016756e-07
## MaritalStatus1                   -8.869642e-05 -2.346843e-06
## MaritalStatus2                   -1.627878e-04 -1.710370e-06
## HourlyRate                       -1.209702e-05 -1.677270e-08
## JobInvolvement                   -3.615797e-04 -6.877000e-07
## JobLevel                         -3.547658e-04 -1.014789e-06
## JobSatisfaction                  -1.859123e-04 -1.866018e-07
## MonthlyIncome                     5.503220e-08  4.198699e-10
## OverTime1                        -5.620376e-05 -4.932077e-07
## PercentSalaryHike                -8.833011e-05 -6.574737e-08
## StandardHours                              NA            NA
## TotalWorkingYears                 4.694684e-05 -1.721348e-06
## WorkLifeBalance                  -4.347923e-04  3.967790e-07
## YearsAtCompany                   -1.610852e-05  3.942483e-07
## YearsInCurrentRole                1.166849e-05  9.954890e-08
## YearsSinceLastPromotion          -2.082766e-06 -1.209516e-07
## YearsWithCurrManager             -2.079536e-05  2.149618e-07
##                                  BusinessTravelTravel_Frequently
## (Intercept)                                        -7.832938e-04
## ï..Age                                              1.210830e-06
## BusinessTravelTravel_Frequently                     1.128950e-03
## BusinessTravelTravel_Rarely                         7.352349e-04
## DailyRate                                           1.165134e-08
## DistanceFromHome                                    5.766290e-07
## EnvironmentSatisfaction                             3.123618e-06
## MaritalStatus1                                      6.387327e-07
## MaritalStatus2                                      3.020544e-05
## HourlyRate                                         -1.149903e-08
## JobInvolvement                                     -1.639430e-05
## JobLevel                                            1.037559e-05
## JobSatisfaction                                    -1.037144e-07
```

```
## MonthlyIncome                                          5.731211e-10
## OverTime1                                             -2.932895e-05
## PercentSalaryHike                                      2.434235e-06
## StandardHours                                                    NA
## TotalWorkingYears                                     -3.436764e-06
## WorkLifeBalance                                       -1.266489e-06
## YearsAtCompany                                        -2.557210e-07
## YearsInCurrentRole                                     9.746342e-07
## YearsSinceLastPromotion                                3.485045e-07
## YearsWithCurrManager                                   1.242096e-06
##                              BusinessTravelTravel_Rarely      DailyRate
## (Intercept)                                -7.779041e-04 -3.236291e-07
## ï..Age                                      7.680367e-07  5.822814e-10
## BusinessTravelTravel_Frequently             7.352349e-04  1.165134e-08
## BusinessTravelTravel_Rarely                 8.430850e-04  9.414516e-09
## DailyRate                                   9.414516e-09  4.640641e-10
## DistanceFromHome                            7.480913e-07  2.184513e-10
## EnvironmentSatisfaction                     2.314696e-07 -3.616916e-09
## MaritalStatus1                             -1.292047e-05 -2.758185e-08
## MaritalStatus2                              3.022079e-05 -3.214523e-08
## HourlyRate                                 -1.768757e-07 -2.062499e-10
## JobInvolvement                             -1.619339e-05 -1.092100e-08
## JobLevel                                    2.551660e-05  7.213168e-09
## JobSatisfaction                             5.032649e-06 -5.734762e-09
## MonthlyIncome                              -4.946546e-09 -1.350323e-12
## OverTime1                                  -1.852194e-05 -2.513401e-09
## PercentSalaryHike                           2.462461e-06 -1.023290e-09
## StandardHours                                         NA            NA
## TotalWorkingYears                          -3.196968e-06 -2.053824e-09
## WorkLifeBalance                             2.542400e-06  1.039512e-08
## YearsAtCompany                              7.144439e-07  3.317002e-09
## YearsInCurrentRole                         -6.489010e-07 -4.917253e-09
## YearsSinceLastPromotion                     2.635400e-06  1.774525e-09
## YearsWithCurrManager                        1.788793e-06  1.410178e-09
##                              DistanceFromHome EnvironmentSatisfaction
## (Intercept)                     -8.923988e-06           -1.768855e-04
## ï..Age                           2.003963e-08           -2.016756e-07
## BusinessTravelTravel_Frequently  5.766290e-07            3.123618e-06
## BusinessTravelTravel_Rarely      7.480913e-07            2.314696e-07
## DailyRate                        2.184513e-10           -3.616916e-09
## DistanceFromHome                 1.141251e-06            1.317086e-07
## EnvironmentSatisfaction          1.317086e-07            6.283349e-05
## MaritalStatus1                  -6.770980e-07            2.832406e-06
## MaritalStatus2                  -2.419215e-07           -4.836457e-07
## HourlyRate                      -1.503358e-08            1.646817e-07
## JobInvolvement                  -9.669465e-08            7.018349e-07
## JobLevel                        -1.864018e-06           -4.278873e-06
## JobSatisfaction                  3.339314e-08            7.802353e-07
## MonthlyIncome                    4.730435e-10            1.087957e-09
## OverTime1                       -6.056618e-07           -1.086495e-05
```

```
## PercentSalaryHike                    -1.026604e-07           5.940381e-07
## StandardHours                                  NA                     NA
## TotalWorkingYears                     -3.147735e-08           2.274742e-07
## WorkLifeBalance                        3.623714e-07          -2.670335e-06
## YearsAtCompany                         2.123615e-08           1.786113e-07
## YearsInCurrentRole                    -5.325585e-08          -8.424603e-07
## YearsSinceLastPromotion               -1.620465e-08          -4.616829e-07
## YearsWithCurrManager                   4.191782e-09           5.075633e-07
##                                 MaritalStatus1 MaritalStatus2
HourlyRate
## (Intercept)                      -8.869642e-05  -1.627878e-04 -1.209702e-
05
## ï..Age                           -2.346843e-06  -1.710370e-06 -1.677270e-
08
## BusinessTravelTravel_Frequently   6.387327e-07   3.020544e-05 -1.149903e-
08
## BusinessTravelTravel_Rarely      -1.292047e-05   3.022079e-05 -1.768757e-
07
## DailyRate                        -2.758185e-08  -3.214523e-08 -2.062499e-
10
## DistanceFromHome                 -6.770980e-07  -2.419215e-07 -1.503358e-
08
## EnvironmentSatisfaction           2.832406e-06  -4.836457e-07  1.646817e-
07
## MaritalStatus1                    4.054413e-04   2.407750e-04 -2.647387e-
07
## MaritalStatus2                    2.407750e-04   5.754201e-04 -9.722470e-
08
## HourlyRate                       -2.647387e-07  -9.722470e-08  1.823732e-
07
## JobInvolvement                   -8.272755e-06  -9.304247e-06 -1.898965e-
07
## JobLevel                          4.906730e-06  -5.057602e-06  4.837135e-
07
## JobSatisfaction                   3.099200e-06   4.962067e-06  2.335697e-
07
## MonthlyIncome                    -3.167241e-09  -7.560540e-10 -7.355523e-
11
## OverTime1                         1.189778e-06  -8.708183e-06  5.058579e-
08
## PercentSalaryHike                -4.077890e-07   9.327665e-07  1.288490e-
08
## StandardHours                              NA             NA
NA
## TotalWorkingYears                 1.760958e-06   8.713968e-07 -6.246804e-
09
## WorkLifeBalance                   2.875027e-06   4.121349e-06 -1.207288e-
08
## YearsAtCompany                    1.800053e-08  -9.286138e-07 -1.297564e-
08
```

```
## YearsInCurrentRole                   -4.465508e-06  -3.069283e-06  1.747047e-08
## YearsSinceLastPromotion              -9.816226e-07   1.530337e-06  2.487540e-08
## YearsWithCurrManager                  1.668243e-06   1.634790e-06  1.036277e-08
##                                    JobInvolvement       JobLevel  JobSatisfaction
## (Intercept)                          -3.615797e-04 -3.547658e-04  -1.859123e-04
## ï..Age                               -6.877000e-07 -1.014789e-06  -1.866018e-07
## BusinessTravelTravel_Frequently      -1.639430e-05  1.037559e-05  -1.037144e-07
## BusinessTravelTravel_Rarely          -1.619339e-05  2.551660e-05   5.032649e-06
## DailyRate                            -1.092100e-08  7.213168e-09  -5.734762e-09
## DistanceFromHome                     -9.669465e-08 -1.864018e-06   3.339314e-08
## EnvironmentSatisfaction               7.018349e-07 -4.278873e-06   7.802353e-07
## MaritalStatus1                       -8.272755e-06  4.906730e-06   3.099200e-06
## MaritalStatus2                       -9.304247e-06 -5.057602e-06   4.962067e-06
## HourlyRate                           -1.898965e-07  4.837135e-07   2.335697e-07
## JobInvolvement                        1.487653e-04 -1.185577e-06   1.589518e-06
## JobLevel                             -1.185577e-06  6.780274e-04  -4.195367e-06
## JobSatisfaction                       1.589518e-06 -4.195367e-06   6.175006e-05
## MonthlyIncome                         4.751016e-10 -1.370500e-07   5.616626e-10
## OverTime1                             6.883557e-07  9.614957e-06  -3.525717e-06
## PercentSalaryHike                     5.874303e-07  2.044729e-06  -3.357832e-07
## StandardHours                                   NA            NA            NA
## TotalWorkingYears                     4.278776e-07 -8.861944e-06   6.094021e-07
## WorkLifeBalance                       1.649519e-06 -1.156541e-05   2.039518e-06
## YearsAtCompany                        1.746125e-06 -8.546891e-07  -7.298850e-07
## YearsInCurrentRole                   -9.221737e-07 -2.508702e-06  -5.130289e-07
```

```
## YearsSinceLastPromotion             8.608065e-07  1.511086e-06    5.806329e-
07
## YearsWithCurrManager              -2.950698e-06 -4.840760e-06    1.285825e-
06
##                               MonthlyIncome      OverTime1
PercentSalaryHike
## (Intercept)                    5.503220e-08 -5.620376e-05             -
8.833011e-05
## ï..Age                         4.198699e-10 -4.932077e-07             -
6.574737e-08
## BusinessTravelTravel_Frequently 5.731211e-10 -2.932895e-05
2.434235e-06
## BusinessTravelTravel_Rarely   -4.946546e-09 -1.852194e-05
2.462461e-06
## DailyRate                     -1.350323e-12 -2.513401e-09             -
1.023290e-09
## DistanceFromHome               4.730435e-10 -6.056618e-07             -
1.026604e-07
## EnvironmentSatisfaction        1.087957e-09 -1.086495e-05
5.940381e-07
## MaritalStatus1                -3.167241e-09  1.189778e-06             -
4.077890e-07
## MaritalStatus2                -7.560540e-10 -8.708183e-06
9.327665e-07
## HourlyRate                    -7.355523e-11  5.058579e-08
1.288490e-08
## JobInvolvement                 4.751016e-10  6.883557e-07
5.874303e-07
## JobLevel                      -1.370500e-07  9.614957e-06
2.044729e-06
## JobSatisfaction                5.616626e-10 -3.525717e-06             -
3.357832e-07
## MonthlyIncome                  3.618738e-11 -1.699460e-09             -
3.272641e-10
## OverTime1                     -1.699460e-09  3.701273e-04
1.332188e-07
## PercentSalaryHike             -3.272641e-10  1.332188e-07
5.591793e-06
## StandardHours                           NA            NA
NA
## TotalWorkingYears             -2.194054e-09 -4.034777e-07             -
2.699628e-08
## WorkLifeBalance                7.108992e-10  5.930020e-06
4.808115e-09
## YearsAtCompany                -4.574143e-10 -1.309809e-06
2.895243e-07
## YearsInCurrentRole             7.367261e-10  1.221700e-06             -
3.126255e-07
## YearsSinceLastPromotion       -7.023626e-10  1.352270e-07
6.474514e-08
```

```
## YearsWithCurrManager           1.863922e-09  3.000276e-06      -
1.437782e-07
##                              StandardHours TotalWorkingYears
WorkLifeBalance
## (Intercept)                             NA     4.694684e-05      -
4.347923e-04
## ï..Age                                  NA    -1.721348e-06
3.967790e-07
## BusinessTravelTravel_Frequently         NA    -3.436764e-06      -
1.266489e-06
## BusinessTravelTravel_Rarely            NA    -3.196968e-06
2.542400e-06
## DailyRate                              NA    -2.053824e-09
1.039512e-08
## DistanceFromHome                       NA    -3.147735e-08
3.623714e-07
## EnvironmentSatisfaction                NA     2.274742e-07      -
2.670335e-06
## MaritalStatus1                         NA     1.760958e-06
2.875027e-06
## MaritalStatus2                         NA     8.713968e-07
4.121349e-06
## HourlyRate                             NA    -6.246804e-09      -
1.207288e-08
## JobInvolvement                         NA     4.278776e-07
1.649519e-06
## JobLevel                               NA    -8.861944e-06      -
1.156541e-05
## JobSatisfaction                        NA     6.094021e-07
2.039518e-06
## MonthlyIncome                          NA    -2.194054e-09
7.108992e-10
## OverTime1                              NA    -4.034777e-07
5.930020e-06
## PercentSalaryHike                      NA    -2.699628e-08
4.808115e-09
## StandardHours                          NA               NA
NA
## TotalWorkingYears                      NA     5.560007e-06
5.851571e-07
## WorkLifeBalance                        NA     5.851571e-07
1.506003e-04
## YearsAtCompany                         NA    -1.816779e-06
6.878569e-07
## YearsInCurrentRole                     NA    -6.156472e-09      -
3.450352e-06
## YearsSinceLastPromotion                NA     9.082512e-08
4.293284e-07
## YearsWithCurrManager                   NA    -3.057660e-07
1.589336e-06
```

```
##                                 YearsAtCompany YearsInCurrentRole
## (Intercept)                     -1.610852e-05      1.166849e-05
## ï..Age                           3.942483e-07      9.954890e-08
## BusinessTravelTravel_Frequently -2.557210e-07      9.746342e-07
## BusinessTravelTravel_Rarely      7.144439e-07     -6.489010e-07
## DailyRate                        3.317002e-09     -4.917253e-09
## DistanceFromHome                 2.123615e-08     -5.325585e-08
## EnvironmentSatisfaction          1.786113e-07     -8.424603e-07
## MaritalStatus1                   1.800053e-08     -4.465508e-06
## MaritalStatus2                  -9.286138e-07     -3.069283e-06
## HourlyRate                      -1.297564e-08      1.747047e-08
## JobInvolvement                   1.746125e-06     -9.221737e-07
## JobLevel                        -8.546891e-07     -2.508702e-06
## JobSatisfaction                 -7.298850e-07     -5.130289e-07
## MonthlyIncome                   -4.574143e-10      7.367261e-10
## OverTime1                       -1.309809e-06      1.221700e-06
## PercentSalaryHike                2.895243e-07     -3.126255e-07
## StandardHours                             NA                NA
## TotalWorkingYears               -1.816779e-06     -6.156472e-09
## WorkLifeBalance                  6.878569e-07     -3.450352e-06
## YearsAtCompany                   8.588361e-06     -4.204054e-06
## YearsInCurrentRole              -4.204054e-06      1.531820e-05
## YearsSinceLastPromotion         -2.721619e-06     -1.927062e-06
## YearsWithCurrManager            -5.124263e-06     -4.743655e-06
##                                 YearsSinceLastPromotion
YearsWithCurrManager
## (Intercept)                              -2.082766e-06          -2.079536e-
05
## ï..Age                                   -1.209516e-07           2.149618e-
07
## BusinessTravelTravel_Frequently           3.485045e-07           1.242096e-
06
## BusinessTravelTravel_Rarely               2.635400e-06           1.788793e-
06
## DailyRate                                 1.774525e-09           1.410178e-
09
## DistanceFromHome                         -1.620465e-08           4.191782e-
09
## EnvironmentSatisfaction                  -4.616829e-07           5.075633e-
07
## MaritalStatus1                           -9.816226e-07           1.668243e-
06
## MaritalStatus2                            1.530337e-06           1.634790e-
06
## HourlyRate                                2.487540e-08           1.036277e-
08
## JobInvolvement                            8.608065e-07          -2.950698e-
06
## JobLevel                                  1.511086e-06          -4.840760e-
06
```

```
## JobSatisfaction                                5.806329e-07            1.285825e-
06
## MonthlyIncome                                 -7.023626e-10            1.863922e-
09
## OverTime1                                      1.352270e-07            3.000276e-
06
## PercentSalaryHike                              6.474514e-08           -1.437782e-
07
## StandardHours                                            NA
NA
## TotalWorkingYears                              9.082512e-08           -3.057660e-
07
## WorkLifeBalance                                4.293284e-07            1.589336e-
06
## YearsAtCompany                                -2.721619e-06           -5.124263e-
06
## YearsInCurrentRole                            -1.927062e-06           -4.743655e-
06
## YearsSinceLastPromotion                        1.193628e-05           -3.744738e-
07
## YearsWithCurrManager                          -3.744738e-07            1.615303e-
05
```

cov2cor(**vcov**(x))

```
## Warning in cov2cor(vcov(x)): diag(.) had 0 or NA entries; non-finite
result is
## doubtful

##                                      (Intercept)       ï..Age
## (Intercept)                          1.000000000 -0.38151678
## ï..Age                              -0.381516783  1.00000000
## BusinessTravelTravel_Frequently     -0.257169187  0.02716855
## BusinessTravelTravel_Rarely         -0.295543836  0.01994192
## DailyRate                           -0.165725796  0.02037814
## DistanceFromHome                    -0.092150963  0.01414229
## EnvironmentSatisfaction             -0.246166086 -0.01918132
## MaritalStatus1                      -0.048592994 -0.08787002
## MaritalStatus2                      -0.074861886 -0.05375490
## HourlyRate                          -0.312485256 -0.02961032
## JobInvolvement                      -0.327027872 -0.04250782
## JobLevel                            -0.150296786 -0.02938143
## JobSatisfaction                     -0.260988250 -0.01790267
## MonthlyIncome                        0.100918273  0.05262072
## OverTime1                           -0.032227109 -0.01932747
## PercentSalaryHike                   -0.412064128 -0.02096156
## StandardHours                                 NA          NA
## TotalWorkingYears                    0.219634336 -0.55036612
## WorkLifeBalance                     -0.390841341  0.02437566
## YearsAtCompany                      -0.060636223  0.10142273
```

```
## YearsInCurrentRole             0.032888371  0.01917579
## YearsSinceLastPromotion       -0.006650244 -0.02639354
## YearsWithCurrManager          -0.057078293  0.04032318
##                               BusinessTravelTravel_Frequently
## (Intercept)                                      -0.2571691874
## ï..Age                                            0.0271685518
## BusinessTravelTravel_Frequently                   1.0000000000
## BusinessTravelTravel_Rarely                       0.7536212222
## DailyRate                                         0.0160971748
## DistanceFromHome                                  0.0160645463
## EnvironmentSatisfaction                           0.0117280276
## MaritalStatus1                                    0.0009440996
## MaritalStatus2                                    0.0374761759
## HourlyRate                                       -0.0008013890
## JobInvolvement                                   -0.0400041115
## JobLevel                                          0.0118591020
## JobSatisfaction                                  -0.0003928103
## MonthlyIncome                                     0.0028355054
## OverTime1                                        -0.0453715524
## PercentSalaryHike                                 0.0306372410
## StandardHours                                               NA
## TotalWorkingYears                                -0.0433785127
## WorkLifeBalance                                  -0.0030715051
## YearsAtCompany                                   -0.0025970119
## YearsInCurrentRole                                0.0074114043
## YearsSinceLastPromotion                           0.0030021790
## YearsWithCurrManager                              0.0091979424
##                               BusinessTravelTravel_Rarely    DailyRate
## (Intercept)                                  -0.295543836 -0.165725796
## ï..Age                                        0.019941918  0.020378143
## BusinessTravelTravel_Frequently               0.753621222  0.016097175
## BusinessTravelTravel_Rarely                   1.000000000  0.015051277
## DailyRate                                     0.015051277  1.000000000
## DistanceFromHome                              0.024117276  0.009492378
## EnvironmentSatisfaction                       0.001005687 -0.021181361
## MaritalStatus1                               -0.022099297 -0.063587295
## MaritalStatus2                                0.043388796 -0.062206403
## HourlyRate                                   -0.014264353 -0.022419411
## JobInvolvement                               -0.045724732 -0.041564520
## JobLevel                                      0.033749203  0.012859186
## JobSatisfaction                               0.022056788 -0.033877221
## MonthlyIncome                                -0.028319645 -0.010420056
## OverTime1                                    -0.033156996 -0.006064532
## PercentSalaryHike                             0.035863956 -0.020087888
## StandardHours                                          NA           NA
## TotalWorkingYears                            -0.046694411 -0.040433063
## WorkLifeBalance                               0.007135021  0.039321278
## YearsAtCompany                                0.008396095  0.052541398
## YearsInCurrentRole                           -0.005710037 -0.058321649
## YearsSinceLastPromotion                       0.026270981  0.023842872
```

```
## YearsWithCurrManager                        0.015328418   0.016287629
##                                DistanceFromHome EnvironmentSatisfaction
## (Intercept)                         -0.0921509625            -0.246166086
## ï..Age                               0.0141422874            -0.019181320
## BusinessTravelTravel_Frequently      0.0160645463             0.011728028
## BusinessTravelTravel_Rarely          0.0241172759             0.001005687
## DailyRate                            0.0094923781            -0.021181361
## DistanceFromHome                     1.0000000000             0.015553494
## EnvironmentSatisfaction              0.0155534938             1.000000000
## MaritalStatus1                      -0.0314772539             0.017745811
## MaritalStatus2                      -0.0094404196            -0.002543544
## HourlyRate                          -0.0329527229             0.048648470
## JobInvolvement                      -0.0074209743             0.007259196
## JobLevel                            -0.0670094287            -0.020730520
## JobSatisfaction                      0.0039778456             0.012525968
## MonthlyIncome                        0.0736091539             0.022815887
## OverTime1                           -0.0294689005            -0.071245376
## PercentSalaryHike                   -0.0406384012             0.031691527
## StandardHours                                 NA                      NA
## TotalWorkingYears                   -0.0124959668             0.012170232
## WorkLifeBalance                      0.0276407841            -0.027450942
## YearsAtCompany                       0.0067831281             0.007688793
## YearsInCurrentRole                  -0.0127371659            -0.027155014
## YearsSinceLastPromotion             -0.0043905045            -0.016858294
## YearsWithCurrManager                 0.0009762947             0.015931899
##                                MaritalStatus1 MaritalStatus2   HourlyRate
## (Intercept)                     -0.0485929943   -0.074861886 -0.312485256
## ï..Age                          -0.0878700245   -0.053754903 -0.029610321
## BusinessTravelTravel_Frequently  0.0009440996    0.037476176 -0.000801389
## BusinessTravelTravel_Rarely     -0.0220992969    0.043388796 -0.014264353
## DailyRate                       -0.0635872952   -0.062206403 -0.022419411
## DistanceFromHome                -0.0314772539   -0.009440420 -0.032952723
## EnvironmentSatisfaction          0.0177458112   -0.002543544  0.048648470
## MaritalStatus1                   1.0000000000    0.498488180 -0.030787393
## MaritalStatus2                   0.4984881796    1.000000000 -0.009490817
## HourlyRate                      -0.0307873929   -0.009490817  1.000000000
## JobInvolvement                  -0.0336849034   -0.031800787 -0.036457393
## JobLevel                         0.0093584643   -0.008097082  0.043499483
## JobSatisfaction                  0.0195869543    0.026323974  0.069601293
## MonthlyIncome                   -0.0261480054   -0.005239402 -0.028632183
## OverTime1                        0.0030713290   -0.018869459  0.006157047
## PercentSalaryHike               -0.0085643806    0.016443903  0.012759250
## StandardHours                             NA             NA           NA
## TotalWorkingYears                0.0370891812    0.015405853 -0.006203541
## WorkLifeBalance                  0.0116349644    0.014000192 -0.002303655
## YearsAtCompany                   0.0003050466   -0.013209533 -0.010367956
## YearsInCurrentRole              -0.0566634618   -0.032691934  0.010452504
## YearsSinceLastPromotion         -0.0141106172    0.018465450  0.016859903
## YearsWithCurrManager             0.0206142787    0.016956742  0.006037655
##                                JobInvolvement      JobLevel
```

```
JobSatisfaction
## (Intercept)                     -0.327027872 -0.150296786    -
0.2609882499
## ï..Age                          -0.042507823 -0.029381432    -
0.0179026665
## BusinessTravelTravel_Frequently  -0.040004112  0.011859102    -
0.0003928103
## BusinessTravelTravel_Rarely     -0.045724732  0.033749203
0.0220567877
## DailyRate                       -0.041564520  0.012859186    -
0.0338772207
## DistanceFromHome                -0.007420974 -0.067009429
0.0039778456
## EnvironmentSatisfaction          0.007259196 -0.020730520
0.0125259680
## MaritalStatus1                  -0.033684903  0.009358464
0.0195869543
## MaritalStatus2                  -0.031800787 -0.008097082
0.0263239737
## HourlyRate                      -0.036457393  0.043499483
0.0696012930
## JobInvolvement                   1.000000000 -0.003732976
0.0165842495
## JobLevel                        -0.003732976  1.000000000    -
0.0205034860
## JobSatisfaction                  0.016584250 -0.020503486
1.0000000000
## MonthlyIncome                    0.006475258 -0.874936863
0.0118816904
## OverTime1                        0.002933503  0.019193234    -
0.0233213236
## PercentSalaryHike                0.020367135  0.033207538    -
0.0180702758
## StandardHours                             NA           NA
NA
## TotalWorkingYears                0.014877537 -0.144333694
0.0328887688
## WorkLifeBalance                  0.011020302 -0.036193007
0.0211493023
## YearsAtCompany                   0.048850530 -0.011200294    -
0.0316942581
## YearsInCurrentRole              -0.019317819 -0.024616239    -
0.0166808958
## YearsSinceLastPromotion          0.020427732  0.016796974
0.0213869274
## YearsWithCurrManager            -0.060193114 -0.046255449
0.0407132732
##                               MonthlyIncome    OverTime1
PercentSalaryHike
## (Intercept)                     0.100918273 -0.032227109        -
```

```
0.4120641276
## ï..Age                            0.052620724 -0.019327469       -
0.0209615570
## BusinessTravelTravel_Frequently   0.002835505 -0.045371552
0.0306372410
## BusinessTravelTravel_Rarely      -0.028319645 -0.033156996
0.0358639557
## DailyRate                        -0.010420056 -0.006064532       -
0.0200878879
## DistanceFromHome                  0.073609154 -0.029468901       -
0.0406384012
## EnvironmentSatisfaction           0.022815887 -0.071245376
0.0316915268
## MaritalStatus1                   -0.026148005  0.003071329       -
0.0085643806
## MaritalStatus2                   -0.005239402 -0.018869459
0.0164439027
## HourlyRate                       -0.028632183  0.006157047
0.0127592503
## JobInvolvement                    0.006475258  0.002933503
0.0203671351
## JobLevel                         -0.874936863  0.019193234
0.0332075378
## JobSatisfaction                   0.011881690 -0.023321324       -
0.0180702758
## MonthlyIncome                     1.000000000 -0.014684418       -
0.0230061660
## OverTime1                        -0.014684418  1.000000000
0.0029282919
## PercentSalaryHike                -0.023006166  0.002928292
1.0000000000
## StandardHours                              NA           NA
NA
## TotalWorkingYears                -0.154678874 -0.008894187       -
0.0048416203
## WorkLifeBalance                   0.009629785  0.025116995
0.0001656862
## YearsAtCompany                   -0.025946333 -0.023231508
0.0417786397
## YearsInCurrentRole                0.031291304  0.016225016       -
0.0337788632
## YearsSinceLastPromotion          -0.033794675  0.002034479
0.0079249610
## YearsWithCurrManager              0.077094285  0.038802402       -
0.0151283143
##                                 StandardHours TotalWorkingYears
WorkLifeBalance
## (Intercept)                              NA      0.2196343357       -
0.3908413414
## ï..Age                                   NA     -0.5503661187
```

```
0.0243756616
## BusinessTravelTravel_Frequently        NA  -0.0433785127   -
0.0030715051
## BusinessTravelTravel_Rarely            NA  -0.0466944105
0.0071350207
## DailyRate                              NA  -0.0404330635
0.0393212780
## DistanceFromHome                       NA  -0.0124959668
0.0276407841
## EnvironmentSatisfaction                NA   0.0121702323   -
0.0274509422
## MaritalStatus1                         NA   0.0370891812
0.0116349644
## MaritalStatus2                         NA   0.0154058533
0.0140001920
## HourlyRate                             NA  -0.0062035413   -
0.0023036550
## JobInvolvement                         NA   0.0148775368
0.0110203019
## JobLevel                               NA  -0.1443336941   -
0.0361930071
## JobSatisfaction                        NA   0.0328887688
0.0211493023
## MonthlyIncome                          NA  -0.1546788736
0.0096297847
## OverTime1                              NA  -0.0088941871
0.0251169951
## PercentSalaryHike                      NA  -0.0048416203
0.0001656862
## StandardHours                          1          NA
NA
## TotalWorkingYears                      NA   1.0000000000
0.0202218978
## WorkLifeBalance                        NA   0.0202218978
1.0000000000
## YearsAtCompany                         NA  -0.2629113150
0.0191262598
## YearsInCurrentRole                     NA  -0.0006670992   -
0.0718367546
## YearsSinceLastPromotion                NA   0.0111489444
0.0101260998
## YearsWithCurrManager                   NA  -0.0322644594
0.0322237337
##                              YearsAtCompany YearsInCurrentRole
## (Intercept)                    -0.0606362226       0.0328883714
## ï..Age                          0.1014227334       0.0191757923
## BusinessTravelTravel_Frequently -0.0025970119       0.0074114043
## BusinessTravelTravel_Rarely     0.0083960946      -0.0057100371
## DailyRate                       0.0525413985      -0.0583216486
## DistanceFromHome                0.0067831281      -0.0127371659
```

```
## EnvironmentSatisfaction               0.0076887933        -0.0271550141
## MaritalStatus1                        0.0003050466        -0.0566634618
## MaritalStatus2                       -0.0132095325        -0.0326919338
## HourlyRate                           -0.0103679560         0.0104525039
## JobInvolvement                        0.0488505305        -0.0193178187
## JobLevel                            -0.0112002936        -0.0246162388
## JobSatisfaction                      -0.0316942581        -0.0166808958
## MonthlyIncome                        -0.0259463327         0.0312913041
## OverTime1                            -0.0232315081         0.0162250158
## PercentSalaryHike                     0.0417786397        -0.0337788632
## StandardHours                                   NA                   NA
## TotalWorkingYears                    -0.2629113150        -0.0006670992
## WorkLifeBalance                       0.0191262598        -0.0718367546
## YearsAtCompany                        1.0000000000        -0.3665298014
## YearsInCurrentRole                   -0.3665298014         1.0000000000
## YearsSinceLastPromotion              -0.2688052208        -0.1425139339
## YearsWithCurrManager                 -0.4350600190        -0.3015658692
##                                YearsSinceLastPromotion
YearsWithCurrManager
## (Intercept)                              -0.006650244           -
0.0570782928
## ï..Age                                   -0.026393543
0.0403231811
## BusinessTravelTravel_Frequently          0.003002179
0.0091979424
## BusinessTravelTravel_Rarely              0.026270981
0.0153284177
## DailyRate                                0.023842872
0.0162876291
## DistanceFromHome                        -0.004390504
0.0009762947
## EnvironmentSatisfaction                 -0.016858294
0.0159318992
## MaritalStatus1                          -0.014110617
0.0206142787
## MaritalStatus2                           0.018465450
0.0169567421
## HourlyRate                               0.016859903
0.0060376552
## JobInvolvement                           0.020427732           -
0.0601931138
## JobLevel                                 0.016796974           -
0.0462554487
## JobSatisfaction                          0.021386927
0.0407132732
## MonthlyIncome                           -0.033794675
0.0770942847
## OverTime1                                0.002034479
0.0388024016
## PercentSalaryHike                        0.007924961           -
```

```
0.0151283143
## StandardHours                                          NA
NA
## TotalWorkingYears                             0.011148944           -
0.0322644594
## WorkLifeBalance                               0.010126100
0.0322237337
## YearsAtCompany                               -0.268805221           -
0.4350600190
## YearsInCurrentRole                           -0.142513934           -
0.3015658692
## YearsSinceLastPromotion                       1.000000000           -
0.0269686876
## YearsWithCurrManager                         -0.026968688
1.0000000000

temp <- influence.measures(x)

## Warning in abbreviate(vn): abbreviate used with non-ASCII chars

temp

## Influence measures of
##    lm(formula = Attrition ~ ï..Age + BusinessTravel + DailyRate +
DistanceFromHome + EnvironmentSatisfaction + MaritalStatus +       HourlyRate
+ JobInvolvement + JobLevel + JobSatisfaction +       MaritalStatus +
MonthlyIncome + OverTime + PercentSalaryHike +       StandardHours +
TotalWorkingYears + WorkLifeBalance + YearsAtCompany +
YearsInCurrentRole + YearsSinceLastPromotion + YearsWithCurrManager,
data = emp_churn) :
##
##          dfb.1_   dfb.ï.Ag dfb.BTT_F dfb.BTT_R  dfb.DlyR  dfb.DsFH   dfb.EnvS
## 1      1.80e-02  6.13e-02 -5.36e-03  1.79e-02  3.96e-02 -5.94e-02 -4.01e-02
## 2      1.06e-02 -1.90e-02 -1.34e-02 -1.19e-03  1.09e-02  2.41e-03 -3.16e-03
## 3     -2.66e-02  1.77e-02 -2.89e-03  1.87e-02  7.38e-02 -4.29e-02  5.17e-02
## 4     -3.95e-03  5.64e-03 -3.06e-02  4.70e-03 -3.43e-02  1.86e-02 -2.42e-02
## 5     -3.42e-02  1.76e-02  1.97e-03 -5.04e-03  9.23e-03  1.42e-02  2.88e-02
## 6     -2.10e-03  1.88e-03 -1.55e-02  3.56e-04 -5.23e-03  9.51e-03 -1.47e-02
## 7      2.95e-02 -4.80e-02  1.76e-03 -3.48e-03 -2.00e-02  1.54e-02 -3.24e-03
## 8      1.15e-02 -7.12e-04 -1.58e-03 -4.72e-03 -8.72e-03 -1.27e-02 -8.43e-03
## 9      1.14e-02 -1.19e-02 -2.44e-02 -3.59e-03  2.04e-02 -2.70e-02 -1.99e-02
## 10     9.67e-04  8.01e-03  9.29e-05 -2.95e-03 -7.74e-03 -1.50e-02 -2.67e-03
## 11     2.02e-03 -2.78e-03  8.45e-04 -2.76e-03  4.24e-04 -8.17e-03  1.48e-02
## 12    -2.44e-02  2.29e-02  2.62e-03 -1.26e-02  4.12e-02 -2.01e-02 -2.96e-02
## 13    -2.11e-02  2.11e-03 -2.67e-03 -1.46e-02  6.76e-03 -4.72e-02  3.42e-02
## 14     4.75e-03 -3.35e-03 -7.45e-04 -3.71e-03 -8.07e-03 -8.27e-03  3.96e-03
## 15     3.98e-02 -2.29e-02 -3.48e-03  1.60e-02 -5.88e-02  7.04e-02  5.63e-03
## 16    -1.23e-03  5.07e-03 -6.83e-04 -3.82e-03 -9.77e-03 -1.00e-02  5.24e-03
## 17    -2.22e-02  7.57e-03  3.82e-03 -7.40e-03  3.21e-02  1.37e-02  4.08e-02
## 18    -4.04e-03  1.75e-02  3.35e-02  3.84e-02 -6.29e-03 -9.71e-03 -1.52e-02
## 19    -2.23e-03  1.59e-03 -1.41e-04  1.62e-03  5.24e-03 -4.02e-03 -6.85e-03
```

```
## 20      -6.77e-03 -2.01e-02  3.68e-03 -7.07e-03  2.41e-02  1.62e-02 -2.35e-02
## 21      -1.87e-03  4.54e-03  7.64e-03  8.67e-03  1.67e-03  2.39e-04  4.36e-03
## 22      -1.96e-02  7.07e-03  5.27e-03  2.77e-02  6.79e-02  1.30e-03  2.09e-02
## 23      -1.66e-02  1.04e-03  5.20e-04 -4.90e-03  9.19e-03  1.04e-03  2.04e-02
## 24       3.38e-03  2.24e-02  6.46e-04 -8.99e-03  1.94e-02 -1.43e-02 -7.74e-03
## 25       5.56e-02  2.06e-03 -5.18e-03  1.66e-02 -4.67e-03 -1.54e-02 -3.59e-02
## 26      -1.88e-03  1.49e-02  2.60e-03  8.51e-03  1.71e-02 -7.83e-03  2.91e-03
## 27       1.08e-02 -4.04e-03  2.82e-02  2.64e-03  2.45e-02  1.72e-02 -1.36e-02
## 28      -2.54e-03 -6.46e-03  6.24e-05 -2.24e-03  1.74e-03  2.63e-04 -1.03e-03
## 29       8.00e-04 -1.55e-05 -3.90e-05  7.66e-04 -8.29e-04 -3.64e-04 -2.28e-03
## 30      -1.46e-02  2.25e-03  4.86e-04 -3.23e-03  3.65e-03  1.20e-02  8.78e-03
## 31      -2.00e-03  2.24e-03  1.02e-03 -3.86e-03 -3.64e-03  8.59e-03 -3.01e-03
## 32       1.25e-02 -9.93e-03  3.58e-04 -3.01e-03 -1.30e-02 -1.75e-03 -7.30e-03
## 33      -8.71e-03  1.12e-02  8.02e-04 -7.50e-03  2.35e-02 -1.38e-03 -2.27e-02
## 34      -7.61e-02 -1.19e-01 -1.18e-02  2.87e-02  8.84e-03 -5.64e-02  9.89e-02
## 35       4.79e-02 -8.70e-02 -9.49e-03  1.38e-02 -6.01e-03 -5.71e-02 -3.59e-02
## 36      -7.49e-03  1.26e-02  6.06e-04  4.02e-03  8.54e-03 -6.57e-03  9.83e-03
## 37      -3.24e-02  1.57e-01  4.22e-05  2.10e-02  1.30e-02 -4.12e-02 -9.07e-02
## 38      -1.65e-03  8.92e-04  2.58e-05  5.67e-04  1.74e-04 -1.22e-03  1.74e-03
## 39      -8.89e-03 -1.17e-02  3.13e-03 -9.02e-03 -6.89e-03  1.65e-02  2.77e-02
## 40       2.73e-03  4.96e-03 -1.10e-02  9.62e-04 -6.62e-03  9.09e-03 -2.42e-03
## 41       1.43e-03 -2.51e-03 -2.59e-04 -1.72e-03  2.78e-03  1.69e-03 -8.17e-04
## 42      -7.51e-03  2.75e-03 -9.94e-04 -5.21e-03 -1.11e-02  7.04e-03 -1.03e-02
## 43       8.72e-02 -5.03e-03  4.74e-03  2.40e-02  6.46e-02  8.11e-02 -6.17e-02
## 44      -1.65e-04  7.20e-03 -1.24e-02 -6.95e-04 -4.90e-03  1.05e-03 -9.94e-03
## 45       9.16e-03  8.66e-03 -1.30e-02 -1.16e-03  1.55e-03  1.10e-02 -3.14e-03
## 46      -2.67e-03 -2.90e-02  4.11e-03  3.80e-02  1.16e-01  3.34e-02 -6.44e-02
## 47       1.29e-03  2.69e-03  3.65e-02  4.03e-02 -1.21e-02 -2.29e-02  9.28e-03
## 48       6.94e-03 -1.27e-03 -4.45e-05 -6.10e-03  1.71e-02 -1.94e-02  8.04e-03
## 49       4.70e-02 -2.99e-02 -3.21e-02  2.32e-04 -2.58e-02  1.65e-02  3.87e-02
## 50      -7.88e-03  3.79e-03  1.97e-04  2.24e-03  4.76e-03 -3.62e-04  5.82e-03
## 51       1.03e-02 -1.74e-02 -9.82e-03  1.38e-02 -1.86e-02 -6.19e-02 -8.25e-02
## 52       3.89e-02 -5.43e-03 -3.98e-03  1.67e-02  7.44e-02 -1.85e-02  3.03e-03
## 53       1.75e-02 -2.61e-02 -2.08e-03 -1.13e-02 -3.51e-02  2.54e-02  1.77e-02
## 54      -3.27e-02  8.09e-03  6.65e-02  7.85e-02 -2.10e-02 -2.60e-03 -3.96e-03
## 55      -2.33e-03  3.34e-02 -1.19e-03 -1.57e-02 -4.46e-02 -4.56e-02 -4.53e-03
## 56      -5.88e-03  1.26e-02 -3.32e-02  3.51e-03  1.93e-02  2.61e-02  4.41e-02
## 57       6.31e-03 -2.60e-03 -2.09e-02 -9.69e-04 -9.68e-04 -1.20e-02  6.73e-03
## 58      -1.38e-02 -1.93e-02  1.37e-03 -1.17e-02 -3.05e-02 -6.14e-02 -2.04e-03
## 59      -5.30e-03 -7.16e-03  1.57e-03  5.96e-03 -5.96e-03 -3.05e-03  1.18e-02
## 60       5.84e-04 -8.56e-04 -2.14e-04 -7.23e-04 -9.00e-04  9.59e-04  1.70e-03
## 61       3.87e-03  8.49e-03  1.25e-03 -9.20e-03  1.95e-02  2.29e-02  3.41e-02
## 62       1.75e-02 -1.14e-02 -3.00e-02 -5.59e-03  3.85e-04 -5.21e-02 -2.50e-02
## 63      -1.69e-02 -5.45e-03 -1.59e-04 -1.61e-02 -2.27e-02  5.71e-03  2.25e-02
## 64       2.23e-03 -2.33e-02  2.64e-04 -5.76e-03 -2.34e-02 -2.52e-02  2.34e-02
## 65      -6.83e-04 -1.49e-03  3.19e-04  1.74e-03  2.70e-03 -3.36e-04  2.57e-04
## 66       4.87e-03 -7.25e-03 -1.10e-04 -2.37e-03 -1.11e-04  8.55e-05 -5.43e-03
## 67      -2.66e-03 -2.39e-02 -3.95e-02 -1.26e-03 -3.17e-02 -7.92e-03  1.66e-02
## 68      -1.31e-03  5.30e-03 -1.16e-05 -1.89e-03 -6.01e-03  1.40e-03  3.44e-03
## 69      -2.54e-02 -8.03e-03 -3.07e-02  3.36e-03  8.39e-03  2.50e-02  1.29e-02
```

```
## 70      3.53e-03   3.88e-02 -3.06e-04   1.85e-02 -6.53e-02 -2.62e-03   6.03e-02
## 71     -2.20e-02  -4.90e-02 -2.98e-02   9.90e-04 -2.60e-02   2.14e-02   3.64e-02
## 72      2.62e-03   1.82e-03 -1.44e-04  -1.18e-03 -3.45e-03   2.75e-03 -1.08e-03
## 73      8.57e-03  -6.99e-03 -5.50e-04  -8.00e-03 -1.48e-02   1.74e-02 -5.23e-03
## 74     -2.09e-04   8.71e-04  3.79e-05  -7.21e-04  1.15e-03   2.06e-03   1.05e-03
## 75     -3.26e-04  -1.36e-03  5.65e-04  -1.07e-03  7.40e-03   1.26e-03   2.49e-03
## 76      2.34e-03   1.22e-03 -9.26e-05  -1.10e-03  1.96e-04   4.88e-04 -6.62e-04
## 77     -1.91e-02   4.87e-03  8.30e-05  -5.38e-03 -9.69e-04   1.24e-02 -8.06e-04
## 78      1.38e-04  -2.29e-03  2.78e-03  -1.74e-03  2.86e-02   3.97e-03 -1.90e-02
## 79     -1.49e-02   5.54e-03  1.35e-03  -3.94e-03  1.21e-02 -9.55e-04   2.26e-02
## 80      2.33e-02  -7.06e-03 -9.21e-06  -8.07e-03 -3.73e-03   1.22e-02   1.34e-02
## 81     -2.26e-02   2.08e-02  2.12e-03  -7.01e-03  8.23e-04   2.37e-02 -2.05e-02
## 82     -1.06e-02  -1.15e-02 -1.19e-03  -9.06e-03 -2.05e-02   1.44e-02   1.25e-02
## 83      1.23e-06  -2.00e-04  5.73e-05  -8.07e-05  7.59e-04   4.14e-04   5.98e-04
## 84     -1.83e-02   4.21e-03  2.66e-02   3.00e-02  7.51e-03   5.87e-03   8.88e-03
## 85      4.63e-03  -2.65e-03 -1.40e-04  -4.29e-03 -9.65e-03   1.19e-02   1.58e-02
## 86     -7.33e-03   4.19e-03  5.01e-04  -1.74e-03 -7.36e-03   1.56e-03 -5.74e-03
## 87     -1.77e-02   1.90e-02 -3.08e-04  -6.45e-03  1.01e-02   1.19e-02 -3.61e-03
## 88     -1.93e-02   1.39e-02  5.02e-04   3.20e-03 -7.70e-03 -7.89e-04   9.85e-03
## 89      2.69e-03   4.30e-03 -2.29e-04  -2.27e-03  5.43e-03   4.54e-03 -1.37e-03
## 90     -7.44e-02   1.55e-01  1.36e-02   4.86e-02 -1.27e-02   3.14e-03   1.55e-02
## 91      5.74e-03   1.01e-02 -2.42e-02  -2.16e-03  6.66e-03   2.01e-02 -8.82e-03
## 92      3.37e-02  -6.29e-02 -5.70e-04  -1.35e-02  1.50e-02 -3.72e-02 -5.78e-03
## 93     -2.53e-02   1.78e-02 -7.14e-04  -1.10e-02 -2.72e-02   1.53e-02 -8.62e-04
## 94     -6.05e-02  -3.16e-03 -4.42e-02   5.32e-03  1.55e-02   3.80e-02 -1.30e-03
## 95      4.42e-03   6.72e-03  1.69e-04  -5.28e-03 -9.03e-03   5.07e-03   7.16e-03
## 96     -2.46e-03  -4.78e-03 -3.23e-05  -6.00e-04 -2.17e-03   1.86e-03   3.76e-03
## 97     -8.12e-03   1.40e-02 -6.01e-04  -5.81e-03 -1.56e-02   1.06e-02   1.85e-02
## 98      1.43e-03  -8.93e-04 -3.45e-03  -3.96e-03 -2.30e-03 -1.04e-03 -9.34e-04
## 99      7.43e-04   2.64e-03 -6.43e-04   1.22e-03 -1.79e-04   8.94e-04   5.27e-03
## 100    -2.76e-03   8.09e-04  1.24e-02   1.41e-02  3.74e-03 -6.90e-03   3.29e-03
## 101    -4.20e-02   1.89e-02  2.10e-03   2.76e-02 -3.71e-03 -2.68e-02   7.16e-03
## 102    -6.03e-03  -1.13e-02  3.24e-05  -7.04e-03 -4.49e-03   1.62e-02 -2.23e-02
## 103     4.48e-03  -4.81e-02  4.96e-02   1.05e-03  9.91e-03 -1.35e-02   4.25e-02
## 104    -6.98e-03   3.90e-03  5.59e-04  -3.11e-03  1.89e-03   3.05e-03   1.23e-02
## 105     1.46e-03  -8.10e-03 -1.62e-02  -1.86e-02  2.64e-03 -6.23e-03   1.89e-03
## 106     3.92e-05   8.61e-03 -4.17e-02  -5.05e-02  2.26e-02 -1.57e-02   4.20e-03
## 107     3.24e-03   6.24e-03 -2.32e-02   4.38e-03 -1.18e-02   2.25e-02   2.81e-02
## 108     7.15e-02  -4.22e-02 -5.14e-03   1.65e-02 -5.56e-02 -2.06e-02   2.53e-03
## 109    -3.90e-03   6.10e-03 -3.40e-04  -3.74e-03 -9.70e-03   1.15e-03 -9.72e-03
## 110    -1.31e-02   2.26e-02  7.32e-04  -1.03e-02  1.33e-02 -1.92e-02   1.35e-02
## 111    -2.59e-02  -2.60e-02 -4.21e-02  -5.38e-03 -5.28e-02   3.46e-02   5.16e-02
## 112     3.84e-03   8.87e-03  5.17e-02   5.11e-03 -6.79e-03 -1.44e-02 -5.87e-02
## 113    -3.26e-03  -9.56e-03  2.65e-02   3.08e-02  1.69e-02 -2.23e-02 -1.02e-02
## 114    -1.33e-02   1.91e-02  8.61e-04  -5.15e-03 -1.14e-02 -1.67e-02   9.11e-03
## 115    -8.59e-03   9.12e-03 -1.10e-03  -6.17e-03 -6.02e-03   4.11e-03 -1.93e-03
## 116     2.47e-03   3.95e-04  3.73e-05  -1.33e-03 -3.03e-03   2.42e-03 -7.21e-04
## 117    -1.95e-02   3.48e-03 -1.08e-03  -6.61e-03 -2.28e-02   4.68e-03 -1.66e-03
## 118     5.95e-04  -9.98e-05 -6.64e-04  -1.81e-05 -7.40e-04 -7.34e-05   2.49e-04
## 119     2.60e-03  -9.84e-04 -6.49e-04  -3.94e-03 -1.30e-03   4.68e-03   1.03e-02
```

```
## 120    1.54e-02    1.92e-03  -1.30e-02    1.76e-03    1.03e-02  -2.25e-02  -3.46e-03
## 121    2.27e-03    1.36e-02  -3.74e-02  -8.01e-03  -2.76e-02  -3.53e-02    2.97e-02
## 122   -1.17e-04  -5.65e-04  -1.12e-02  -1.33e-02  -8.95e-04    6.76e-03    1.52e-03
## 123   -6.79e-02    1.84e-01  -5.23e-04    1.91e-02  -4.78e-02    3.57e-02  -4.14e-02
## 124    2.07e-04  -1.68e-03  -1.06e-04  -6.50e-04    1.51e-04    3.49e-04    2.04e-03
## 125    6.37e-02  -4.97e-02  -5.82e-04    2.07e-02  -6.53e-02  -2.69e-02  -3.20e-02
## 126   -2.44e-02    1.79e-02  -1.25e-03  -9.19e-03  -1.49e-03    8.25e-03  -5.63e-03
## 127   -4.77e-02  -9.60e-03  -1.70e-02    2.42e-02  -1.17e-01    1.31e-01    1.09e-01
## 128    1.91e-02  -5.67e-02  -2.46e-03    1.74e-02  -2.64e-02    6.03e-02    4.45e-02
## 129    8.91e-04    1.08e-02    4.84e-04  -2.37e-03    4.51e-03    6.44e-03  -2.95e-03
## 130    1.12e-03  -5.24e-03  -1.39e-04  -1.32e-03    3.09e-03  -4.50e-03  -1.37e-03
## 131    2.47e-04    1.41e-03  -2.64e-02    4.67e-03  -8.08e-03  -5.57e-02    1.17e-02
## 132    1.02e-02  -1.54e-02  -1.68e-02    3.65e-04  -7.28e-04  -5.08e-03  -3.45e-03
## 133    4.06e-02  -3.14e-03    6.38e-04    2.00e-02  -2.12e-02    5.04e-02  -3.27e-02
## 134    8.44e-03  -3.56e-03  -2.48e-04  -3.14e-03    7.59e-04    1.02e-03  -7.89e-04
## 135    7.23e-03    8.84e-03  -6.43e-04  -4.00e-03  -9.45e-03  -1.40e-02  -2.73e-03
## 136    5.47e-03  -1.35e-03  -9.24e-04  -4.36e-03    1.20e-02    3.92e-03    4.50e-03
## 137    2.65e-02    8.23e-02    8.38e-02    5.93e-03    6.12e-02  -9.63e-04  -9.00e-02
## 138   -3.04e-03  -8.20e-04    2.69e-04    3.35e-03    9.61e-03  -4.05e-03    7.47e-03
## 139   -2.41e-02    2.66e-02  -2.43e-03  -1.21e-02  -1.02e-02  -5.85e-02    3.55e-02
## 140   -7.53e-03    1.87e-02    9.78e-04  -6.16e-03  -1.36e-02    3.13e-03  -3.19e-03
## 141    1.21e-02  -2.21e-02  -8.65e-04    2.39e-02    4.40e-02    7.27e-03  -9.42e-02
## 142    8.38e-03  -2.04e-02  -6.32e-04  -5.62e-03  -1.56e-02  -3.18e-02  -4.14e-03
## 143   -1.13e-03    2.93e-02    4.62e-03  -7.58e-03    2.71e-02    2.09e-02  -2.40e-02
## 144   -2.64e-02    2.60e-03    8.22e-04  -1.02e-02    2.08e-02  -2.76e-02    3.61e-02
## 145    8.78e-04    6.18e-04  -5.52e-03  -1.22e-03    8.05e-04  -8.91e-05  -3.82e-03
## 146   -4.65e-03    8.22e-03  -1.74e-04  -3.89e-03    1.51e-02    4.21e-03  -1.18e-02
## 147   -2.06e-02    2.99e-03  -1.48e-04  -9.25e-03  -3.20e-02    1.28e-02    1.43e-02
## 148   -8.91e-03    6.59e-03  -1.78e-02  -5.20e-04  -3.04e-04  -2.50e-03  -1.52e-02
## 149    1.32e-02  -9.54e-03  -5.38e-04  -4.01e-03  -3.71e-03    8.53e-04  -4.11e-03
## 150   -1.98e-02    3.67e-02    1.38e-03  -1.00e-02  -2.75e-02    1.87e-02    1.63e-02
## 151   -3.79e-04    6.51e-04  -1.15e-02  -1.16e-03  -1.36e-02  -1.75e-02    4.99e-03
## 152   -2.50e-03  -3.55e-04    5.55e-05    1.64e-03  -1.84e-03  -5.29e-03    1.28e-03
## 153    8.89e-03  -3.58e-02  -9.02e-05  -9.01e-03  -2.64e-02    1.33e-02    1.66e-02
## 154    2.09e-03    1.24e-03    2.80e-04    2.45e-03  -6.74e-03  -1.31e-03  -2.28e-03
## 155    1.87e-04    6.38e-04  -1.78e-02  -1.44e-03  -6.75e-03    1.55e-03    8.96e-03
## 156    1.47e-02  -1.49e-02  -3.94e-02  -4.57e-02    2.55e-02  -1.72e-02    1.73e-02
## 157    2.22e-03  -1.81e-02  -9.55e-04  -4.28e-03  -8.45e-03    1.60e-03    6.30e-03
## 158    2.23e-02  -9.65e-02  -1.22e-03  -1.17e-02  -2.53e-02    2.10e-03    2.24e-02
## 159    5.90e-03    2.30e-03    5.09e-04    3.32e-03  -4.57e-03  -5.01e-03    2.56e-03
## 160    4.82e-03  -3.26e-04  -1.53e-02    7.70e-04    1.53e-02    1.09e-02  -4.63e-03
## 161    1.18e-02    1.03e-02  -7.50e-04  -4.27e-03  -7.79e-03  -8.75e-03  -3.47e-03
## 162   -1.35e-02    7.88e-03    1.59e-02    1.85e-02    3.53e-03    1.01e-03  -8.24e-03
## 163   -2.52e-02    9.68e-03    6.62e-04  -5.08e-03    1.44e-02  -2.13e-02  -5.42e-03
## 164    1.69e-02  -2.54e-02  -7.14e-04  -4.82e-03    1.33e-02  -1.60e-02  -2.41e-03
## 165   -3.15e-02    9.08e-03    5.45e-02    6.26e-02  -3.25e-02    1.90e-02  -2.88e-03
## 166    2.54e-03  -3.52e-03  -3.85e-04  -1.65e-03  -6.81e-03  -1.69e-03  -8.19e-04
## 167   -1.50e-03  -1.46e-03  -6.20e-05  -1.37e-03    2.49e-03  -1.81e-03    4.40e-03
## 168   -6.63e-04    1.74e-03    1.19e-05  -7.30e-04  -2.08e-03    8.47e-04    1.29e-03
## 169    5.99e-03  -4.14e-03  -6.14e-04  -4.98e-03    4.08e-04    8.04e-03    1.42e-02
```

```
## 170  -3.10e-03  3.56e-03  3.47e-04 -5.66e-03  2.17e-02  4.08e-03 -4.06e-03
## 171  -2.76e-02  3.26e-02  3.53e-03 -9.64e-03 -2.67e-02 -3.06e-02 -5.91e-03
## 172   1.57e-02 -5.62e-02  6.02e-02  3.77e-03 -1.05e-02 -4.20e-02  1.64e-02
## 173  -3.40e-02  6.88e-03 -3.15e-02  1.00e-03 -4.27e-02  1.62e-02 -2.50e-02
## 174  -1.39e-03  8.39e-04  1.94e-03  2.17e-03  1.34e-03  1.76e-04 -1.42e-04
## 175   5.47e-03 -2.44e-02 -2.64e-04 -7.48e-03 -1.96e-02  8.53e-03  2.52e-03
## 176   1.15e-02 -3.04e-02  1.06e-03 -6.72e-03  7.51e-03  1.73e-03 -2.30e-03
## 177   7.92e-03 -2.99e-03  5.41e-04 -3.70e-03  1.43e-02  7.15e-03 -3.09e-03
## 178   6.53e-02 -7.90e-02  1.94e-03  2.97e-02 -6.05e-02 -4.98e-02 -2.94e-02
## 179   9.35e-03 -1.67e-04 -7.93e-04 -4.37e-03  4.70e-03  8.34e-03  4.51e-03
## 180   9.75e-03 -1.68e-02 -4.90e-04 -6.05e-03 -1.88e-02 -1.56e-03 -2.48e-03
## 181   2.62e-02  1.34e-02  1.93e-03 -6.14e-03  3.72e-02 -4.77e-03 -7.88e-03
## 182   9.66e-03  4.95e-03  3.07e-04 -7.91e-03  7.34e-03 -4.47e-02 -2.58e-02
## 183  -3.50e-02  6.92e-02  1.38e-03  1.96e-02  6.11e-02  5.51e-02 -3.10e-02
## 184   8.31e-04 -1.96e-02 -6.57e-04 -2.96e-03  9.05e-03  7.02e-03 -2.79e-03
## 185  -5.52e-03  1.09e-02  5.51e-04  1.97e-03  2.62e-03  1.92e-03  3.51e-03
## 186   1.68e-04  1.89e-04  7.97e-06 -5.81e-04 -4.16e-04 -1.08e-03 -2.03e-03
## 187  -5.22e-03 -3.13e-03  4.63e-04  3.94e-03  5.09e-03 -4.84e-03  1.03e-02
## 188  -8.09e-03  4.14e-03 -1.90e-03  3.61e-03 -4.46e-03  1.15e-02  4.56e-03
## 189  -1.95e-03 -2.55e-04 -4.04e-03  3.73e-05 -1.50e-03  2.04e-03 -3.53e-03
## 190   7.75e-04 -4.79e-04 -7.76e-06 -1.89e-04  8.20e-04  4.99e-04 -7.55e-04
## 191  -1.87e-04  9.66e-04  1.97e-05  3.06e-03 -1.87e-03 -8.15e-03  1.84e-03
## 192  -3.39e-03  1.21e-02  2.37e-04 -4.85e-03 -1.96e-03  7.30e-04 -1.77e-02
## 193   3.31e-02 -4.52e-03 -2.61e-03  1.75e-02 -2.58e-02  7.75e-02 -3.54e-02
## 194  -1.70e-02  2.41e-02 -4.49e-02 -5.09e-02  2.22e-02 -3.01e-03  1.82e-02
## 195   3.11e-05  3.34e-04 -4.30e-03 -4.99e-03  1.87e-03 -1.68e-03 -2.65e-03
## 196  -2.18e-02 -1.23e-02  4.73e-03 -4.60e-03  3.68e-02 -3.81e-02  1.90e-02
## 197  -3.90e-02  1.12e-03 -3.40e-02  1.79e-03  3.86e-02  2.31e-02  1.94e-02
## 198   1.30e-03  2.06e-03 -7.51e-03 -8.61e-03  6.57e-04  4.53e-03  5.96e-04
## 199  -1.29e-03 -1.36e-03 -1.24e-04  5.30e-04  2.03e-03 -1.80e-03  2.66e-03
## 200  -4.99e-04  5.32e-04  1.61e-04  6.01e-04  5.50e-04  2.77e-03  1.53e-03
## 201  -1.92e-02  2.71e-02 -3.56e-02 -3.51e-04  2.00e-02  2.95e-02 -7.82e-03
## 202  -3.82e-03  6.04e-03 -5.95e-03 -6.91e-03  7.66e-04  2.59e-03  2.63e-03
## 203   2.51e-02 -8.69e-03 -3.44e-02 -2.02e-03 -4.13e-03 -5.90e-03 -2.44e-02
## 204   2.87e-02  4.27e-03  1.63e-03 -5.36e-03 -3.58e-03 -1.28e-02 -2.73e-03
## 205  -6.13e-03 -4.78e-02 -5.72e-03  1.09e-02  3.92e-02  1.09e-01 -3.16e-02
## 206  -1.50e-02 -7.35e-02  6.75e-03  4.54e-02 -1.28e-01  1.50e-01 -3.51e-02
## 207  -3.67e-03  3.25e-02  1.42e-03 -8.24e-03 -1.34e-02  1.16e-02 -2.18e-02
## 208   6.36e-03 -1.16e-02 -2.90e-02 -1.11e-03  3.70e-03 -2.58e-02  1.11e-02
## 209   5.75e-04  4.80e-04 -1.12e-03 -1.33e-03  3.34e-04 -7.35e-05  5.79e-04
## 210  -4.70e-03  1.67e-03  4.26e-04  2.04e-03 -2.48e-03 -4.99e-03  5.91e-03
## 211   1.23e-01 -5.77e-02  8.00e-03  4.22e-02  5.15e-02 -4.05e-02  8.08e-02
## 212  -6.85e-04  3.47e-03  8.92e-03  1.02e-02 -4.42e-04  4.57e-03 -1.19e-03
## 213   5.87e-03  6.05e-03 -1.75e-02  4.61e-04 -1.35e-02 -1.94e-02 -1.67e-02
## 214  -2.57e-03 -9.80e-03 -9.00e-04 -2.39e-03 -8.79e-03  7.63e-04  3.28e-03
## 215   2.27e-02 -2.93e-02 -8.83e-03  1.06e-02  3.05e-02 -3.43e-02  5.15e-02
## 216   1.77e-02  3.47e-03  1.77e-03 -4.45e-03 -2.47e-03  4.12e-03 -2.11e-02
## 217   7.40e-02 -2.17e-02  5.59e-02  3.81e-04 -3.95e-02  8.54e-02  1.46e-02
## 218   3.20e-02 -4.01e-02 -3.62e-03  2.55e-02  3.56e-02 -6.52e-02  2.41e-02
## 219  -3.13e-03 -3.13e-05  1.00e-02  1.10e-02 -3.48e-03  1.60e-03 -4.25e-03
```

```
## 220   -2.18e-03   6.55e-03   2.13e-05   1.12e-03   3.17e-03  -2.43e-03   4.04e-03
## 221   -1.01e-04  -4.66e-05  -1.17e-06   5.11e-05   1.91e-04  -5.39e-05   1.31e-04
## 222   -9.20e-03   4.07e-03  -5.44e-04  -6.52e-03   2.51e-02   9.96e-03  -4.98e-03
## 223    4.44e-03  -8.41e-03  -2.19e-02  -1.02e-03   6.87e-03  -4.99e-03   1.21e-02
## 224    1.69e-03  -3.80e-04   8.56e-05   9.65e-04  -3.33e-03  -1.50e-03  -2.84e-03
## 225   -6.98e-03   1.42e-03   1.14e-02   1.33e-02  -2.09e-03   5.41e-03  -1.25e-03
## 226    4.02e-03  -1.12e-02  -2.99e-04  -1.50e-03   5.13e-03   2.26e-03  -9.48e-04
## 227   -3.32e-03   1.03e-03  -1.17e-02  -1.17e-03   1.09e-02   5.24e-03   1.32e-02
## 228   -9.95e-04   7.26e-03  -9.08e-03  -8.94e-05  -9.49e-03   7.59e-03   5.22e-03
## 229    5.60e-03  -1.10e-03  -5.52e-03  -1.18e-04  -1.99e-03   4.02e-03  -1.19e-03
## 230    2.44e-02  -9.87e-03  -2.28e-03   1.73e-02   1.11e-02   4.50e-02   8.01e-03
## 231    9.47e-03  -3.60e-02  -1.54e-03  -6.44e-03  -1.67e-02   9.20e-03  -3.35e-03
## 232   -6.70e-03   4.71e-04   9.06e-04   7.96e-03  -1.28e-02  -1.06e-02   3.86e-03
## 233    4.38e-03  -2.00e-02  -4.58e-04  -2.52e-03  -5.55e-05   2.06e-03   3.67e-03
## 234    1.54e-03  -1.82e-02  -1.10e-04   6.07e-03  -2.02e-03  -1.67e-02   2.52e-02
## 235    5.83e-02  -2.29e-02  -7.58e-03   1.61e-02  -1.13e-02   2.96e-02   1.33e-02
## 236   -1.11e-02  -8.61e-04   5.68e-05   1.67e-03   1.49e-03   3.83e-03   5.98e-03
## 237    4.04e-02  -5.39e-02  -5.75e-03   2.31e-02  -5.89e-02  -6.49e-02  -1.14e-01
## 238    4.49e-03  -6.90e-03   6.60e-02   7.17e-02  -1.18e-02   2.39e-02   4.22e-02
## 239   -5.10e-03   8.52e-04   2.89e-04  -2.25e-03  -1.12e-02   3.58e-03  -1.70e-03
## 240    7.13e-02   7.77e-03  -2.63e-03   1.50e-02  -3.01e-02  -4.07e-02   4.73e-02
## 241   -9.21e-04   5.79e-04   8.15e-05   4.53e-04   1.26e-03  -8.31e-04   2.30e-04
## 242    9.88e-04   1.34e-04   2.70e-03   3.12e-03  -3.48e-04  -2.06e-03  -4.61e-04
## 243   -7.56e-03   7.15e-03  -7.92e-04  -6.33e-03  -1.70e-02  -1.34e-02  -2.16e-03
## 244    2.94e-03  -1.90e-03  -4.26e-04  -1.70e-03  -2.63e-03  -3.68e-03   3.56e-03
## 245   -1.33e-02  -2.65e-03  -2.17e-03   3.04e-03  -1.70e-02  -1.27e-02   6.98e-03
## 246   -2.41e-03   5.18e-03  -1.34e-02  -2.36e-04  -1.11e-02   4.89e-03   5.46e-03
## 247   -7.02e-03  -4.46e-03  -5.98e-04  -4.13e-03  -1.13e-04   4.14e-03  -2.97e-03
## 248   -3.09e-03   2.61e-03  -8.82e-05  -1.83e-03   3.99e-03   4.53e-03  -5.90e-03
## 249   -2.60e-02   1.63e-02   1.37e-03  -2.78e-03  -6.32e-03   1.48e-02  -5.98e-03
## 250    9.53e-03  -9.14e-03  -9.22e-03   6.35e-04  -6.20e-03   2.12e-03   1.01e-02
## 251    6.33e-02  -6.76e-02   8.70e-02  -2.06e-03  -5.49e-02   9.23e-03  -9.94e-02
## 252    2.12e-02   7.45e-03  -2.41e-02  -2.10e-03   8.74e-03   1.62e-02  -7.19e-03
## 253    5.40e-03   4.12e-03  -2.20e-04  -5.47e-03   3.26e-03  -8.18e-03  -3.51e-03
## 254    2.43e-02  -2.23e-02   3.49e-03  -6.05e-03  -8.71e-03  -2.67e-02  -2.76e-02
## 255   -3.68e-04  -1.83e-03   1.63e-04   8.84e-04   1.52e-03   2.37e-03   1.86e-03
## 256   -1.16e-02   1.37e-02   8.37e-04  -4.34e-03   3.31e-03   1.28e-02   1.89e-02
## 257   -2.01e-02  -2.62e-02  -2.90e-04  -1.29e-02   3.08e-02   2.07e-02  -2.31e-02
## 258   -5.84e-03  -2.55e-03   1.28e-03   4.93e-03   1.34e-02  -6.69e-03  -1.28e-02
## 259    1.48e-03  -4.60e-03  -7.83e-05  -5.57e-04  -2.06e-05   1.36e-03  -4.80e-04
## 260    2.76e-02   4.88e-03   6.52e-02   1.64e-03  -4.55e-02   1.25e-01   1.50e-02
## 261    6.15e-03   2.41e-03  -2.23e-02   1.96e-03  -1.83e-02   7.19e-03   5.83e-03
## 262    3.57e-03  -1.30e-03  -1.62e-02  -1.85e-02   8.00e-03  -6.53e-03   7.12e-03
## 263   -1.24e-02   8.98e-03   2.49e-04  -8.67e-03   2.79e-02   1.95e-02  -2.29e-02
## 264   -4.78e-02   2.26e-02   2.05e-03  -5.00e-03   2.23e-02   2.13e-02  -4.51e-03
## 265    1.22e-01  -3.67e-02  -5.95e-03   1.40e-02  -3.62e-02  -4.26e-02  -7.48e-02
## 266   -1.24e-02   2.42e-02  -2.98e-04  -6.60e-03  -1.74e-02   1.68e-02   2.65e-02
## 267    1.43e-02   1.01e-02  -2.01e-03  -1.02e-02  -2.72e-02  -2.43e-02   7.50e-03
## 268   -9.76e-04   1.09e-03   2.18e-03   2.49e-03   3.29e-04   5.93e-04   5.52e-04
## 269    1.13e-02  -2.02e-03   2.80e-04  -2.59e-03  -9.62e-03  -7.91e-03  -1.30e-03
```

```
## 270    4.50e-04 -4.09e-03 -4.19e-04  3.24e-03  1.10e-02 -2.29e-03  8.38e-03
## 271    7.15e-03 -3.76e-03  2.16e-03 -2.01e-03  5.60e-03  1.04e-02 -1.22e-02
## 272    4.07e-02  9.98e-02 -1.37e-01 -1.60e-01 -1.63e-02  1.27e-01 -8.86e-02
## 273   -8.90e-04 -4.92e-04  4.43e-05  2.95e-04  4.32e-04 -1.00e-04  9.01e-04
## 274   -4.17e-03  1.26e-03 -4.79e-05  1.05e-03 -4.64e-03 -1.13e-03  1.08e-03
## 275    8.25e-03  2.26e-02 -5.17e-04 -7.85e-03 -1.01e-02  1.11e-02 -2.14e-02
## 276   -5.90e-03  6.26e-03  2.48e-02  2.90e-02  4.13e-03  9.77e-03  1.53e-02
## 277    4.40e-03  7.82e-04 -1.20e-03 -4.14e-03 -8.09e-03 -1.21e-02  4.68e-03
## 278    2.89e-02 -1.53e-02 -3.79e-04 -1.74e-02  3.04e-02  1.18e-02  4.94e-02
## 279   -2.72e-03  1.11e-02 -1.74e-02 -1.47e-03 -1.66e-02  1.29e-02 -4.77e-03
## 280    6.36e-04 -7.38e-04  1.72e-04  1.26e-03 -5.91e-04 -2.31e-03 -5.01e-03
## 281    9.94e-04 -9.30e-03  5.48e-04 -1.74e-03 -4.30e-03  5.90e-03 -1.58e-03
## 282   -5.28e-04 -9.21e-05  7.51e-07  1.50e-04 -1.95e-04 -4.28e-04 -1.97e-04
## 283   -8.53e-03  9.59e-03 -1.75e-02 -7.34e-04  1.12e-02  1.28e-02  7.29e-03
## 284    1.61e-02 -2.98e-02  5.31e-05 -4.99e-03  1.79e-02 -1.36e-02  8.49e-03
## 285   -5.11e-02  4.13e-02 -5.52e-02  5.24e-03  2.96e-02 -2.68e-03  7.65e-02
## 286    1.50e-04 -2.52e-04 -7.50e-05  3.12e-04  1.13e-03 -6.86e-04  7.93e-04
## 287    8.55e-03 -2.50e-02  6.76e-02 -8.42e-04 -1.92e-03  8.88e-02  6.14e-02
## 288   -1.97e-03  9.28e-05  2.02e-04  9.54e-04 -7.31e-04  2.88e-03  2.05e-03
## 289    4.43e-02 -4.26e-02 -1.69e-03  2.24e-02  7.65e-02  4.19e-02 -8.57e-02
## 290    7.55e-03  3.55e-03 -3.11e-04 -3.60e-03 -5.80e-03  3.48e-04 -9.38e-03
## 291   -2.34e-02 -1.52e-02 -4.15e-02  6.95e-03  9.80e-03 -6.90e-03 -1.70e-03
## 292   -1.50e-02 -3.24e-03  9.27e-04 -9.94e-03  6.67e-03  1.31e-02 -3.21e-03
## 293   -9.56e-03 -2.51e-03 -2.26e-02 -8.32e-04  1.54e-02  7.18e-03 -1.98e-02
## 294    3.64e-02 -5.26e-02 -3.38e-03  2.38e-02  2.43e-02 -2.93e-02  4.47e-02
## 295   -1.42e-02 -2.62e-02 -4.00e-02  3.11e-03 -5.61e-03  1.88e-03  2.40e-02
## 296    1.10e-02  3.53e-03 -1.23e-02  2.67e-04  3.32e-03 -1.90e-02 -4.00e-03
## 297    7.12e-02 -8.88e-02 -4.73e-03  2.30e-02 -7.68e-02 -4.03e-02  1.54e-02
## 298    1.67e-03  8.66e-04 -2.40e-04 -1.36e-03 -2.78e-03 -1.75e-03 -9.38e-04
## 299    1.42e-02 -4.45e-03 -1.22e-02  7.35e-04  6.65e-03 -1.02e-02 -4.44e-03
## 300    4.35e-03 -8.08e-03 -1.21e-03 -3.11e-03 -5.87e-03  3.89e-03 -5.26e-03
## 301   -6.44e-04 -1.59e-04 -1.34e-05  2.38e-04 -9.35e-04 -6.78e-04  1.09e-03
## 302   -2.42e-02  3.53e-02 -3.35e-04 -1.17e-02 -4.14e-03 -4.51e-03 -2.84e-02
## 303    8.48e-03  1.15e-02  1.39e-04 -5.97e-03 -2.59e-02 -1.18e-02  8.17e-03
## 304   -2.62e-04  1.32e-03  1.76e-04 -4.28e-04  2.51e-03  5.18e-04  7.45e-04
## 305   -1.10e-02 -7.46e-03  6.21e-04  8.23e-03  9.94e-03 -1.71e-02  4.06e-03
## 306    8.81e-04  2.26e-05 -2.15e-03 -2.53e-03  5.97e-04  1.50e-03 -5.70e-04
## 307   -7.78e-04  2.14e-03 -9.33e-05 -1.09e-03 -4.77e-04  9.20e-04 -3.23e-03
## 308   -8.97e-03  1.15e-02 -4.73e-04 -4.99e-03 -1.25e-04 -3.02e-02  2.25e-02
## 309   -1.34e-02 -3.86e-02  3.10e-02  3.56e-02  1.29e-02  1.27e-02 -1.08e-02
## 310    1.99e-03  6.05e-03  2.92e-03 -3.73e-03  6.80e-03  7.66e-03 -4.53e-03
## 311   -5.40e-02  1.96e-02  1.46e-03 -6.92e-03  4.12e-02  2.14e-02  3.83e-02
## 312    1.50e-02  1.01e-03 -1.75e-02 -2.91e-03 -1.63e-02  7.63e-03  1.91e-02
## 313   -2.51e-02  2.54e-03 -1.58e-04 -1.22e-02  4.11e-02  2.21e-02 -3.62e-03
## 314   -1.68e-03  4.53e-03 -1.18e-02  6.65e-04  4.98e-03  3.71e-03 -1.10e-02
## 315    3.47e-03  1.26e-02  2.69e-03 -5.49e-03  3.62e-02 -2.09e-03 -6.22e-03
## 316    5.98e-03 -1.66e-02 -1.54e-02 -9.48e-04  1.63e-02 -2.02e-03 -3.21e-03
## 317    4.90e-03 -1.17e-03  2.01e-03 -4.99e-03 -1.50e-02  1.77e-02 -3.32e-03
## 318   -3.29e-02  1.54e-01  8.23e-03  3.76e-02 -2.34e-03 -1.57e-02  2.26e-02
## 319   -3.07e-02  2.05e-02  4.93e-03 -1.05e-02 -3.95e-02  1.90e-02 -4.97e-03
```

```
## 320   -2.78e-02   2.28e-02   2.43e-03  -1.12e-02   1.37e-02   7.44e-03  -1.09e-04
## 321    5.13e-03   1.32e-02   2.14e-03  -7.95e-03  -3.26e-02   1.96e-02  -2.09e-02
## 322   -1.11e-03  -1.24e-02   5.32e-04   5.18e-03  -5.72e-03  -1.60e-03   1.38e-02
## 323    2.36e-04   1.51e-03   2.21e-04  -1.18e-03  -1.37e-03   3.05e-03   4.71e-03
## 324    7.04e-02  -2.83e-02  -2.07e-03   1.62e-02   3.66e-02  -3.91e-02  -6.91e-02
## 325   -4.52e-03  -5.15e-03   2.71e-04   2.83e-03   6.54e-03   1.42e-02   7.57e-03
## 326    7.51e-03   5.61e-03  -1.58e-02  -2.50e-03  -1.10e-04   4.50e-03  -3.20e-03
## 327    9.16e-04   7.20e-03  -1.91e-02  -1.24e-03   2.50e-03   3.09e-03  -3.62e-03
## 328   -6.18e-03  -1.75e-02  -6.12e-03   1.86e-02   4.53e-02  -5.47e-02   6.58e-02
## 329   -3.68e-02   3.23e-03  -3.60e-02  -1.66e-03   1.83e-02  -1.76e-03   1.75e-02
## 330   -4.02e-03   4.43e-04   3.00e-04   3.26e-03   1.69e-02  -4.20e-03   1.19e-02
## 331    6.31e-03  -1.24e-02  -1.35e-02  -1.36e-03   5.33e-03  -1.46e-03  -1.70e-03
## 332   -2.69e-02   1.72e-02   4.56e-02   5.34e-02   2.70e-02   1.97e-02  -2.91e-03
## 333   -4.15e-03  -1.91e-02  -1.87e-02   6.56e-04  -4.70e-03  -2.00e-02  -1.62e-02
## 334   -3.99e-03  -7.88e-03  -6.14e-04  -3.44e-03  -4.45e-03   2.47e-03  -2.51e-03
## 335   -9.28e-03   6.69e-03   2.50e-04   3.41e-03  -4.38e-03  -1.77e-03   7.29e-03
## 336   -1.25e-03  -2.94e-02  -3.09e-03  -1.36e-02  -1.98e-02   2.81e-02   1.93e-02
## 337    1.08e-01  -2.28e-02  -2.71e-03   1.30e-02  -4.90e-02  -1.04e-02  -3.10e-02
## 338   -2.32e-02   2.20e-03  -1.15e-03  -1.26e-02  -3.50e-04  -4.42e-03   1.59e-02
## 339   -1.65e-03   1.05e-03  -1.74e-04  -8.45e-04   1.01e-03   5.95e-04  -1.53e-03
## 340   -4.58e-04   3.10e-03  -1.09e-04  -1.35e-03  -2.51e-03   6.14e-04   2.03e-03
## 341   -4.71e-03   2.62e-03   1.03e-03   4.00e-03   5.65e-03  -3.00e-03   8.26e-03
## 342    6.74e-03  -3.60e-03  -1.09e-03  -5.43e-03   1.25e-02  -7.14e-03  -1.88e-03
## 343   -2.83e-03   1.04e-02   8.53e-04  -9.48e-03  -2.08e-02   7.59e-03  -2.34e-04
## 344   -2.14e-02   8.26e-03  -1.40e-03  -1.00e-02   3.37e-02  -4.83e-03  -2.01e-02
## 345    4.71e-05   1.83e-04   6.87e-06  -1.66e-04  -5.55e-04   1.91e-04  -1.01e-04
## 346   -2.25e-03   1.20e-02  -9.08e-04  -5.38e-03  -1.06e-02  -2.07e-02  -3.64e-03
## 347    1.45e-02  -3.34e-02   5.71e-04  -1.19e-02   2.12e-02   1.25e-02  -3.24e-02
## 348    3.95e-02  -4.00e-02  -2.70e-02  -2.43e-03  -2.57e-02   1.47e-02   1.13e-02
## 349   -3.23e-03  -2.37e-03  -2.26e-04  -6.25e-03  -1.45e-03  -2.98e-02   2.39e-02
## 350    4.08e-03  -1.65e-03  -7.96e-03  -9.40e-03  -9.70e-04  -3.29e-03   3.84e-03
## 351    6.14e-04  -3.13e-02   4.77e-04  -8.93e-03   1.36e-02   1.56e-02   5.59e-05
## 352   -3.10e-04   1.49e-03   2.84e-04  -1.58e-03  -3.62e-03   3.97e-03  -1.77e-03
## 353    3.25e-03  -1.21e-02  -1.22e-03  -5.43e-03   1.43e-02  -3.70e-02   1.94e-02
## 354    2.82e-03   3.94e-03   8.81e-04  -6.04e-03  -1.77e-02   5.96e-03   4.78e-04
## 355    4.93e-03   7.21e-03   4.41e-02   5.05e-02   7.57e-03  -3.06e-02  -1.80e-02
## 356    2.19e-04   3.01e-03  -3.74e-05  -1.15e-03  -6.85e-04   2.62e-03  -5.97e-04
## 357    1.60e-02  -3.32e-03  -9.04e-04  -7.49e-03  -2.09e-02   1.42e-02   2.25e-02
## 358    4.10e-02  -3.23e-02   3.08e-02  -3.05e-03   1.95e-03  -2.70e-02  -4.21e-02
## 359   -6.13e-04  -2.25e-04   2.23e-03   2.59e-03  -9.71e-05   8.06e-04  -1.01e-03
## 360   -4.32e-03   1.37e-03  -5.34e-03   2.25e-05   2.38e-03   3.05e-03   6.01e-03
## 361   -7.95e-03   1.61e-02  -2.22e-04   1.90e-03  -4.55e-03  -6.71e-03   8.81e-03
## 362    4.64e-03  -2.97e-03   8.13e-04  -1.38e-03  -4.12e-03  -5.68e-04  -5.29e-03
## 363   -3.18e-02   2.75e-02   4.88e-02   5.47e-02  -4.06e-03   2.49e-03   2.89e-02
## 364    2.05e-02   3.36e-02  -5.29e-03   1.72e-02  -4.76e-02  -1.72e-02   4.64e-02
## 365    2.21e-03   7.16e-03   5.16e-04  -1.46e-03  -7.05e-04  -2.51e-04  -3.03e-03
## 366   -2.13e-04   8.21e-03  -1.23e-02  -1.44e-02   4.38e-03  -1.14e-03   5.72e-04
## 367    1.66e-02   7.91e-02   7.60e-02   1.78e-03  -7.80e-02  -2.62e-02  -8.26e-02
## 368    2.21e-03  -1.38e-03  -9.95e-05  -7.79e-04  -1.08e-03  -3.28e-04  -2.33e-03
## 369    2.85e-03   4.19e-02  -1.47e-03   1.89e-02  -2.81e-02   8.07e-02   5.99e-03
```

```
## 370   -4.23e-02 -9.52e-03  1.86e-03 -1.89e-02  3.32e-02 -2.28e-03 -2.42e-03
## 371    5.84e-03 -7.26e-02 -6.19e-03  1.79e-02 -9.24e-02  2.34e-02  2.40e-02
## 372    7.29e-03  6.80e-03 -3.46e-04 -6.70e-03 -1.63e-02 -2.38e-02 -1.55e-02
## 373    4.19e-03  5.38e-03 -1.21e-03 -9.02e-03  1.17e-03  1.64e-04 -7.81e-03
## 374   -5.88e-05  4.27e-04 -4.16e-05 -2.92e-04 -1.04e-03  5.31e-04 -7.68e-04
## 375    3.60e-03  5.40e-03  9.47e-05 -3.97e-03  1.02e-02  6.14e-04  4.43e-03
## 376    1.63e-04  2.49e-03 -2.63e-04 -5.25e-03 -1.44e-02  2.46e-03  8.21e-03
## 377   -6.30e-03  1.04e-02 -1.78e-04  3.20e-03  6.78e-03  4.94e-03  3.14e-03
## 378    1.14e-03 -4.76e-04  1.08e-04 -7.28e-04  3.04e-03  2.06e-03 -3.03e-03
## 379    4.78e-02 -1.25e-02 -1.53e-01 -1.71e-01  7.76e-02  6.09e-02 -9.47e-02
## 380    9.15e-03 -1.05e-03  1.82e-03 -1.10e-03 -1.05e-02  7.58e-03 -1.73e-03
## 381    1.50e-02  1.68e-02 -1.34e-05 -7.17e-03 -1.93e-02 -1.05e-03 -1.33e-02
## 382    7.49e-04  6.05e-05  1.31e-05 -4.36e-03  1.82e-02  1.08e-02 -4.42e-03
## 383    7.65e-03 -5.33e-02  7.46e-02 -2.74e-03 -2.70e-02 -4.26e-02  2.28e-02
## 384   -3.92e-02  2.71e-02  1.74e-03 -8.00e-03  2.94e-02 -5.71e-03  3.50e-02
## 385   -1.09e-02  4.38e-04 -5.33e-04 -7.85e-03  2.41e-02  1.60e-02  1.23e-02
## 386   -2.57e-02 -4.73e-03  5.54e-02  6.85e-04 -3.40e-02 -2.89e-02  8.32e-03
## 387   -7.62e-04  2.93e-03 -2.71e-04 -3.11e-03 -4.81e-03 -3.40e-03 -7.02e-03
## 388   -6.95e-05  1.94e-03  2.45e-04  1.18e-03 -3.18e-04 -1.72e-03  2.35e-03
## 389    2.13e-03 -1.13e-02 -5.54e-04 -4.90e-03  1.64e-02  1.09e-02  6.41e-03
## 390   -4.31e-02  4.16e-02  7.39e-03 -7.88e-03 -4.24e-02 -1.11e-03 -2.19e-03
## 391   -3.72e-03  5.49e-04 -3.58e-04 -2.30e-03 -2.70e-03 -1.83e-03  6.88e-03
## 392    1.19e-03  1.19e-02  4.83e-04 -3.28e-03  6.85e-03  1.02e-02  4.76e-03
## 393   -4.15e-03 -4.05e-03  1.61e-04 -9.42e-04  3.05e-04  2.86e-03  8.41e-03
## 394    1.25e-03  1.02e-04 -8.81e-03 -1.05e-02  4.72e-03 -2.40e-03  1.01e-03
## 395   -2.43e-02  8.54e-03  4.83e-04 -3.39e-03  7.92e-03  3.93e-03  6.24e-03
## 396    1.25e-02 -8.93e-03 -1.17e-02 -3.47e-04  1.09e-02 -1.19e-02 -1.11e-02
## 397    1.95e-02 -1.69e-02 -7.19e-04 -7.50e-03 -2.27e-02  2.72e-03 -5.89e-04
## 398   -1.25e-02  3.10e-02  3.09e-03 -1.40e-02 -1.09e-02  2.44e-02  2.65e-02
## 399   -8.00e-03  1.08e-02  5.40e-02  6.01e-02 -1.16e-02 -3.42e-02  1.76e-02
## 400   -1.08e-02  2.07e-03 -4.37e-05 -5.81e-03  1.84e-02  1.66e-02 -2.06e-02
## 401    4.10e-03  4.62e-03 -1.78e-02  1.29e-05 -1.39e-02  1.26e-02  1.03e-02
## 402    7.78e-05 -2.52e-04  3.67e-04 -1.12e-04 -9.37e-06 -1.77e-04  1.10e-04
## 403   -3.18e-03  3.54e-03  3.41e-05 -8.06e-03 -1.51e-02 -8.15e-03  1.18e-02
## 404   -2.19e-03  3.89e-03 -6.70e-08  1.49e-03 -1.65e-03 -4.71e-03 -2.95e-03
## 405    2.34e-04  9.51e-03 -6.97e-04 -5.16e-03 -1.29e-02 -8.82e-03 -2.96e-03
## 406    8.23e-02 -7.96e-02 -6.50e-03  1.23e-02 -2.02e-02 -4.46e-02 -8.90e-02
## 407   -4.33e-03  3.39e-03  1.74e-03 -2.07e-03  1.32e-02  8.64e-03 -9.58e-03
## 408    3.46e-03 -1.13e-02 -1.41e-04 -3.55e-03  1.45e-02 -8.81e-05  1.21e-02
## 409    1.23e-02 -7.80e-03 -9.22e-04  2.20e-03  1.74e-02 -6.19e-03  1.57e-02
## 410   -1.35e-03  8.06e-03 -2.24e-02 -2.68e-04  1.35e-02 -3.94e-02  2.46e-02
## 411   -1.74e-02  1.61e-02 -1.30e-03 -9.50e-03  1.95e-02  1.45e-02 -4.78e-03
## 412   -1.85e-02 -1.41e-02  7.95e-04 -3.31e-03  7.73e-03  2.58e-03  1.70e-02
## 413   -5.69e-03  2.68e-03  7.20e-04  3.90e-03  1.11e-02  7.49e-03  2.34e-03
## 414    1.03e-02 -7.73e-03 -8.20e-03 -7.68e-04 -8.01e-03 -1.28e-02 -6.56e-03
## 415    3.65e-02 -4.81e-02 -6.43e-03  1.33e-02  7.34e-02 -4.13e-02 -7.33e-02
## 416    8.50e-02  3.28e-02  9.09e-02  1.52e-02 -7.23e-02 -1.75e-02  6.69e-02
## 417    4.12e-02 -2.52e-02 -2.87e-02 -1.19e-03 -3.40e-02  1.98e-02 -2.18e-02
## 418   -2.42e-02 -4.68e-03  1.79e-03  8.56e-03  3.11e-02 -2.15e-02  6.47e-03
## 419    2.95e-03  1.14e-02 -2.77e-03 -9.96e-03 -1.72e-02 -2.44e-02  2.04e-02
```

```
## 420    2.95e-03 -1.56e-03 -3.80e-03 -4.43e-03  1.82e-03 -1.31e-03  5.16e-04
## 421    1.18e-03  3.74e-03 -3.93e-04 -2.00e-03 -2.45e-03  3.37e-03  1.98e-03
## 422    4.94e-03 -4.19e-02  2.21e-03  2.69e-02 -5.63e-02  1.21e-01  2.02e-02
## 423    7.76e-02 -7.01e-02 -3.05e-03  2.45e-02 -2.89e-02 -3.80e-02 -8.64e-02
## 424   -4.68e-03  3.57e-03  1.09e-02  1.27e-02 -6.67e-03 -6.35e-03 -8.61e-04
## 425   -1.13e-02  1.59e-03 -1.86e-04 -4.04e-03  1.61e-02 -2.36e-02  1.41e-02
## 426    1.03e-02 -5.63e-03 -9.84e-04 -7.55e-03 -1.43e-02 -3.76e-02  8.31e-03
## 427   -1.10e-02  5.78e-03  1.50e-02  1.68e-02 -4.43e-03  5.13e-03 -1.35e-03
## 428    2.76e-02 -3.04e-02 -1.86e-02 -2.62e-03 -2.30e-02 -2.70e-02 -2.57e-03
## 429   -3.07e-04  2.23e-04 -6.56e-05  9.58e-04  8.03e-04 -1.83e-03 -3.27e-03
## 430   -8.48e-03  3.50e-03  4.33e-04 -3.95e-04 -8.73e-04  3.16e-03  5.89e-03
## 431   -3.01e-02 -1.81e-02 -3.56e-03 -1.67e-02  3.97e-02 -5.16e-02 -3.32e-02
## 432   -1.65e-03 -1.22e-02  1.09e-03 -3.34e-03  5.46e-03  8.89e-04 -1.44e-03
## 433   -1.15e-03  1.91e-03 -1.51e-04 -1.28e-03 -2.86e-03  1.70e-03 -2.60e-03
## 434    2.50e-02 -7.95e-03 -2.13e-04 -6.18e-03 -1.01e-02  1.04e-03 -3.24e-03
## 435   -1.30e-02 -6.58e-03  1.94e-03  6.03e-03  1.05e-02  2.27e-04  2.16e-03
## 436   -4.18e-03 -5.99e-02 -6.46e-03  1.78e-02  7.27e-02  5.45e-02 -5.06e-02
## 437    1.12e-01 -6.05e-03  8.47e-03  4.07e-02 -3.01e-02  1.73e-02 -1.02e-01
## 438   -8.76e-03  1.24e-03  4.60e-04 -6.60e-03  1.45e-02  1.91e-03 -2.02e-02
## 439    1.23e-02  3.41e-03  8.24e-04 -4.80e-03 -1.49e-02 -9.87e-03 -1.37e-02
## 440    4.59e-02 -7.40e-02  7.58e-02 -6.83e-03 -4.11e-02  7.65e-02 -8.43e-02
## 441    1.66e-02 -2.02e-02  6.24e-02  2.16e-03  2.08e-02  7.57e-02 -3.64e-02
## 442    1.64e-02 -1.19e-02 -1.84e-02  6.13e-04 -2.14e-02  7.91e-03  7.54e-03
## 443   -2.07e-02 -3.09e-03  3.21e-02  3.56e-02  2.56e-03 -1.41e-03  8.85e-03
## 444    1.46e-02 -6.58e-02  7.44e-02  6.03e-04  7.93e-02 -2.90e-02  2.15e-02
## 445   -3.36e-04  2.27e-03 -6.00e-05  8.51e-04 -2.92e-03 -1.77e-03 -1.37e-03
## 446    5.72e-03  4.87e-03  3.29e-04 -2.45e-03 -5.42e-03 -8.89e-03  1.18e-02
## 447    2.51e-03  1.41e-03 -1.30e-02 -1.47e-02 -5.88e-03  7.76e-04  6.44e-03
## 448   -1.07e-05  2.99e-05  3.63e-06 -1.32e-05  1.98e-05  4.33e-05  2.48e-05
## 449    1.40e-03  1.49e-03  1.67e-04 -1.85e-03  3.85e-03  1.66e-03  2.17e-03
## 450   -3.16e-03 -7.35e-03 -1.08e-02  8.02e-04  6.78e-03 -1.12e-04 -2.90e-03
## 451    9.02e-03  1.22e-02  3.31e-03 -6.26e-03 -2.51e-03  1.70e-02  1.66e-02
## 452    2.06e-02 -2.04e-02 -1.61e-03 -1.10e-02  2.68e-02 -3.30e-02 -2.29e-02
## 453   -1.46e-02  1.21e-02  6.89e-04  3.83e-03 -4.53e-03 -7.35e-03  8.89e-03
## 454    7.29e-02 -5.52e-02  5.36e-02 -2.72e-03 -4.88e-02  3.97e-02 -3.34e-02
## 455   -5.22e-05 -1.84e-04  1.14e-05  1.16e-04 -2.77e-04  2.49e-04  2.09e-04
## 456   -8.71e-03 -2.32e-03  7.25e-04  2.98e-03  1.23e-03 -5.94e-03 -8.53e-03
## 457   -1.15e-03  2.24e-03 -6.51e-04 -1.89e-03  1.43e-03  6.33e-04 -9.81e-04
## 458    2.57e-02 -4.49e-02  3.79e-02 -2.88e-03  4.32e-02 -1.66e-02 -2.43e-02
## 459   -3.03e-02  1.33e-02  3.39e-02  4.03e-02 -9.94e-03 -3.41e-02 -4.01e-03
## 460   -3.18e-02 -2.54e-02  6.23e-02  7.14e-02  1.57e-02  2.33e-02  4.20e-02
## 461   -1.81e-02  2.84e-02 -8.88e-04 -1.09e-02  1.73e-03 -4.62e-02  3.03e-02
## 462    9.24e-04 -9.50e-03  1.22e-04 -6.92e-03  2.17e-02  1.65e-02  2.40e-02
## 463    3.24e-03  4.01e-04  1.99e-04 -1.54e-03  4.55e-03 -5.21e-03 -4.24e-03
## 464    4.25e-02 -1.09e-02  1.55e-03  1.59e-02 -2.12e-02  5.06e-02  7.72e-03
## 465    3.89e-03  2.04e-04  9.25e-06 -1.80e-03 -2.79e-04  3.87e-03  2.74e-03
## 466   -1.52e-02  1.89e-02 -1.74e-02  4.19e-03 -4.75e-03 -1.48e-02  2.02e-02
## 467    6.22e-06  1.12e-05 -9.40e-07 -9.25e-06 -3.07e-05  2.59e-05  1.97e-05
## 468   -6.97e-03 -2.20e-03  1.45e-02  1.64e-02  9.43e-03  8.82e-04  9.66e-03
## 469    8.06e-03 -1.43e-02  1.14e-05 -4.42e-03 -3.16e-03  4.31e-03 -9.20e-03
```

```
## 470    3.46e-03 -3.02e-02 -2.29e-01 -2.68e-01  1.39e-01  1.35e-02  1.03e-01
## 471   -6.37e-03  1.80e-02 -2.29e-02 -1.68e-04  1.21e-02 -3.25e-02 -2.12e-02
## 472    8.73e-04  1.97e-03  7.74e-05 -4.07e-04 -2.69e-03 -4.32e-04 -7.76e-04
## 473   -1.32e-02 -3.99e-03  3.47e-04 -3.77e-03  1.09e-02  1.19e-02  7.50e-03
## 474    3.19e-03 -2.74e-04 -2.06e-04 -1.38e-03 -3.33e-03 -3.20e-03 -3.03e-03
## 475    4.85e-03  3.04e-02  4.71e-03 -4.61e-03  9.49e-03 -3.49e-02  1.42e-02
## 476    1.00e-02  1.59e-02 -9.00e-04 -8.07e-03  2.85e-03 -3.81e-02  2.43e-02
## 477    1.05e-02  1.54e-02 -2.07e-03 -8.64e-03 -5.55e-04 -1.55e-02 -2.36e-02
## 478    6.60e-03  1.42e-03 -1.69e-02  1.66e-03 -2.02e-02  1.09e-02  1.95e-02
## 479   -1.22e-02  1.12e-02  8.36e-04 -3.25e-03  3.96e-03 -4.96e-03  5.94e-03
## 480    2.70e-02 -5.73e-02  5.21e-02 -5.82e-03  5.15e-02 -1.43e-02 -7.16e-02
## 481    1.15e-03  8.65e-03  7.13e-02  1.62e-03 -3.57e-02  1.65e-02 -2.82e-02
## 482   -1.21e-02 -4.28e-03  2.74e-03 -7.11e-03  3.47e-02  2.46e-02  1.76e-02
## 483    8.35e-02 -5.20e-02  7.53e-03  3.59e-02  8.26e-02  2.21e-02 -4.09e-02
## 484   -1.46e-02 -3.63e-04 -8.93e-04 -1.47e-02  1.20e-02 -4.90e-02  4.03e-02
## 485   -9.52e-03 -7.72e-03  1.88e-04  3.60e-03 -5.34e-03 -3.08e-03 -9.56e-03
## 486   -3.31e-02  1.45e-02 -1.20e-03 -9.53e-03  8.25e-04  6.40e-03  2.71e-02
## 487   -2.20e-02  2.31e-02  4.83e-03 -7.31e-04  1.66e-02  1.55e-02 -2.36e-02
## 488   -9.31e-03  2.56e-02 -9.87e-05 -8.99e-03 -1.27e-02  1.78e-02 -2.50e-02
## 489   -3.15e-04  2.53e-04 -1.10e-05  1.29e-04 -1.28e-04 -3.01e-04  9.58e-05
## 490   -2.17e-02  1.26e-02 -4.92e-06 -7.29e-03  5.11e-03  5.55e-03  1.46e-02
## 491   -3.11e-02 -8.97e-03  1.16e-03 -7.64e-03  2.41e-02  2.18e-02 -6.19e-03
## 492    1.88e-02 -1.77e-02 -2.16e-02 -1.69e-03 -6.48e-03  7.14e-04 -1.52e-02
## 493   -9.76e-03 -1.03e-03 -2.02e-04 -1.17e-03 -4.59e-03  4.37e-03 -5.68e-03
## 494   -6.57e-03 -2.20e-02 -2.04e-04 -7.41e-03 -1.66e-02  1.33e-02  2.81e-02
## 495    1.03e-03 -1.90e-04  2.98e-04 -1.05e-02  2.95e-02 -1.27e-02 -2.97e-03
## 496    3.97e-02 -5.22e-02  3.46e-03  3.07e-02  1.07e-01 -5.55e-02  1.66e-02
## 497   -2.01e-02  2.63e-02  4.55e-04 -9.70e-03 -3.29e-02 -4.01e-02 -5.27e-03
## 498   -7.22e-04 -1.51e-03 -1.91e-04  1.93e-04  1.36e-03 -7.97e-04  1.22e-03
## 499   -5.12e-03  2.26e-02  3.45e-04 -6.48e-03  8.91e-03  7.30e-03  2.30e-02
## 500   -6.95e-04 -5.72e-04 -4.63e-04 -2.42e-03 -4.65e-03 -3.03e-04 -8.31e-04
## 501   -7.40e-03  2.97e-03  2.64e-03 -6.55e-03  1.13e-02  3.22e-03  3.55e-02
## 502    8.82e-03 -6.70e-04 -2.05e-02 -2.14e-03  2.33e-02  1.09e-02 -5.38e-03
## 503    4.97e-03 -1.04e-02 -1.45e-04 -2.42e-03  5.76e-03  4.11e-03 -5.76e-03
## 504   -3.19e-03  6.59e-04  1.18e-04 -1.47e-03 -4.77e-03  3.33e-03  2.51e-03
## 505   -3.29e-02  9.46e-02  7.40e-02 -7.71e-04 -6.06e-02  1.01e-01 -7.56e-02
## 506    1.95e-03  1.56e-02  2.60e-03 -5.84e-03 -7.34e-03  7.90e-03 -3.34e-03
## 507   -1.19e-04  2.82e-04  4.89e-05  4.54e-04 -6.67e-04 -6.90e-04  1.79e-04
## 508   -7.05e-03  6.98e-03  1.78e-04 -4.34e-03 -1.05e-02  8.79e-03  6.43e-03
## 509   -1.80e-02  1.11e-02 -8.94e-04 -1.25e-02 -1.63e-02  7.05e-03  1.50e-02
## 510   -5.89e-04  1.41e-03 -2.49e-03 -3.00e-04 -1.51e-03  6.93e-04 -5.48e-04
## 511    8.01e-03 -8.76e-03 -2.29e-04 -1.83e-03  4.59e-03 -5.71e-03 -1.12e-03
## 512   -4.39e-02  1.15e-02  7.14e-04 -1.07e-02 -7.03e-03 -4.80e-03  2.43e-02
## 513   -3.12e-02  1.44e-02  5.61e-04 -1.20e-02 -2.36e-02  1.61e-02  4.01e-02
## 514    3.69e-02 -5.88e-02 -5.84e-03  1.85e-02  7.08e-02  8.59e-03  4.12e-02
## 515    3.87e-02 -3.32e-03  3.62e-02 -3.59e-03  2.81e-02 -2.26e-02 -5.52e-02
## 516   -7.24e-03 -5.41e-03  1.71e-02  1.99e-02  1.20e-03  5.84e-03 -1.63e-03
## 517   -4.46e-03  1.81e-02  1.63e-03 -3.05e-03 -2.65e-03  7.65e-03  1.95e-02
## 518    1.13e-03  1.11e-03 -2.17e-05 -4.03e-04  9.34e-05  2.60e-04 -1.22e-03
## 519    2.94e-03 -3.51e-03 -5.66e-04 -2.86e-03  6.19e-03  1.43e-03 -5.34e-03
```

```
## 520   -6.86e-03   1.01e-02 -1.98e-02 -3.29e-03   2.82e-05   1.32e-02   7.26e-03
## 521    1.26e-04 -1.31e-03   8.30e-05 -2.06e-04   3.85e-05   7.24e-04   6.58e-04
## 522    1.67e-02   7.55e-03 -1.10e-02 -7.34e-04 -1.02e-02   7.41e-03 -8.71e-03
## 523    6.77e-03 -3.38e-03   1.36e-05 -1.49e-03 -4.04e-03 -1.24e-03 -5.04e-03
## 524    1.41e-02 -1.02e-02   1.97e-03 -2.06e-03 -9.48e-03 -2.25e-02 -1.04e-02
## 525    5.52e-03 -2.67e-03 -1.75e-03 -7.51e-03 -2.18e-02 -9.07e-04 -1.11e-02
## 526    4.73e-02 -6.05e-02 -2.77e-03   2.49e-02 -8.40e-03 -4.45e-02 -9.07e-02
## 527   -4.94e-03   6.06e-03   1.00e-03 -7.00e-03   8.93e-03   1.23e-02 -1.62e-02
## 528   -4.83e-04   4.05e-04   5.06e-07 -6.48e-04 -4.76e-04 -2.35e-04 -1.72e-03
## 529    1.12e-03   4.66e-02   6.59e-02 -1.23e-02 -3.83e-02 -9.41e-03 -4.23e-02
## 530   -2.70e-05 -3.42e-05   3.10e-06 -1.87e-05 -3.02e-06   4.39e-05   3.53e-05
## 531   -1.03e-03   1.59e-03   3.50e-05 -4.82e-04   6.80e-04   1.62e-03 -3.40e-04
## 532    1.05e-04   1.49e-03 -2.65e-04 -2.60e-03 -3.06e-03   3.00e-03 -8.56e-04
## 533   -3.56e-03 -3.24e-03   4.24e-04 -2.30e-03   1.23e-03 -4.61e-03 -7.38e-03
## 534    1.51e-03   3.20e-03 -2.18e-02   1.31e-03   9.49e-03   1.04e-02 -1.77e-02
## 535   -1.61e-02 -1.05e-02 -1.83e-03   2.16e-03   2.15e-03 -3.90e-03   5.36e-03
## 536   -2.39e-03   4.69e-03 -1.36e-03 -5.93e-03   7.16e-03 -1.12e-03   5.03e-03
## 537    2.25e-02 -7.72e-02 -1.80e-03 -1.00e-02 -2.47e-02 -1.88e-02   3.46e-02
## 538   -4.45e-03   9.28e-03 -1.38e-02 -1.72e-03   1.21e-02   9.49e-05 -1.11e-02
## 539    1.56e-03 -1.78e-03   4.17e-04   3.74e-03 -1.06e-02 -8.88e-03   1.27e-02
## 540    3.22e-03 -1.23e-02 -3.05e-04 -1.75e-03   5.25e-03 -6.79e-05 -5.18e-03
## 541    7.86e-02 -3.26e-02 -3.57e-03   1.40e-02 -5.82e-03 -3.59e-02 -6.21e-02
## 542    1.73e-03   1.33e-04 -3.32e-03 -4.03e-03 -1.35e-03 -2.41e-04 -1.97e-03
## 543    2.31e-02 -1.93e-03   3.40e-03 -8.11e-03   3.63e-02   2.69e-02 -2.33e-03
## 544   -6.33e-02 -4.47e-02   6.87e-02   7.85e-02   2.16e-02 -5.52e-02   4.40e-02
## 545   -2.94e-03   7.41e-03 -2.45e-02 -1.08e-03   2.40e-02   1.53e-02 -2.23e-02
## 546    7.07e-03   4.98e-03 -9.80e-04 -3.66e-03   4.78e-03 -9.90e-03 -2.34e-03
## 547    5.88e-03 -1.99e-03   6.18e-05 -7.32e-03 -2.85e-02 -4.22e-03 -5.37e-03
## 548   -5.02e-02   6.25e-02   7.35e-02   1.94e-04   1.29e-02   7.16e-02   5.56e-03
## 549    8.99e-03 -1.35e-02 -1.50e-02 -1.27e-03   7.32e-04 -7.85e-03 -1.23e-02
## 550   -4.56e-04   5.11e-03   1.12e-03 -7.28e-03 -1.08e-02   1.41e-03   1.12e-02
## 551   -1.88e-02   2.17e-02   1.25e-03 -5.16e-03   4.90e-03 -1.02e-03   1.15e-02
## 552   -4.57e-03 -2.36e-04   3.86e-04 -1.15e-03   7.57e-03   3.50e-03 -1.65e-03
## 553   -3.19e-03   6.37e-04 -1.07e-03   2.32e-03 -2.18e-03 -2.15e-03   2.78e-03
## 554    2.46e-02 -3.45e-02 -5.77e-04 -1.41e-02 -1.29e-03   2.65e-02 -3.21e-02
## 555   -3.22e-02   1.80e-02 -1.99e-03 -8.76e-03 -8.51e-03   4.97e-03 -2.42e-02
## 556    3.25e-03   9.27e-04 -8.38e-04 -3.66e-03 -4.27e-03 -1.12e-03 -7.63e-03
## 557    1.50e-03 -8.82e-04   4.91e-05 -3.96e-04   1.09e-03   5.03e-04 -1.11e-03
## 558    4.30e-03 -4.98e-03 -9.42e-03 -1.10e-02   3.49e-03 -3.21e-03   3.89e-03
## 559    4.75e-03   7.06e-03 -2.04e-02 -6.59e-04   1.44e-02 -2.55e-02   2.14e-02
## 560   -1.36e-02 -8.57e-03   3.33e-03 -4.29e-03   3.60e-02   2.25e-02 -2.85e-02
## 561   -1.88e-02   2.17e-03 -8.82e-04 -7.84e-03   2.43e-02   1.56e-03   1.16e-02
## 562    4.83e-03   2.91e-03 -6.70e-04   2.00e-03   2.70e-04 -3.46e-03   2.53e-03
## 563    2.94e-02 -1.68e-02 -8.60e-03   2.08e-02 -4.11e-02 -5.81e-02   5.84e-02
## 564    1.66e-03   1.48e-02 -1.74e-03 -9.43e-03 -3.03e-03 -3.22e-02 -5.39e-03
## 565   -2.16e-02 -4.13e-02 -2.75e-03 -1.24e-02 -1.35e-02   1.57e-02   1.85e-02
## 566   -1.14e-03   1.83e-02   1.69e-03 -6.83e-03   2.37e-02 -2.84e-03   2.80e-02
## 567   -5.77e-02   9.48e-02   5.78e-02 -3.84e-03 -5.02e-03   1.02e-01 -3.47e-02
## 568    2.29e-03 -6.46e-04 -1.44e-04 -9.83e-04   2.33e-03   1.62e-03 -2.34e-03
## 569   -5.18e-02   6.49e-02 -5.98e-03   9.44e-03 -2.07e-02 -6.17e-02   8.06e-02
```

```
## 570   -1.47e-02  -5.41e-03   2.92e-02   3.38e-02  -2.18e-02   3.70e-03   1.97e-02
## 571   -5.04e-03   2.17e-02  -1.75e-02  -2.08e-02  -2.21e-03   9.60e-03   8.67e-03
## 572   -4.64e-02   2.39e-02  -4.10e-02  -4.51e-03   1.58e-02   2.44e-02   4.20e-02
## 573   -1.55e-02   1.92e-02   7.46e-04  -5.37e-03   7.57e-03  -3.05e-02   8.97e-03
## 574    8.17e-02  -4.76e-02   5.24e-03   2.85e-02   5.57e-02  -5.91e-03   6.25e-02
## 575    1.35e-03   3.31e-03   1.30e-03  -2.29e-03   1.27e-02   7.55e-03   4.43e-03
## 576    2.51e-02  -5.12e-02  -1.18e-03  -8.65e-03   1.91e-02  -2.22e-02  -1.88e-02
## 577    1.14e-02   9.33e-03  -1.39e-02  -4.10e-04   2.47e-04   3.17e-03  -4.22e-03
## 578   -8.05e-03  -1.49e-02   4.54e-05  -1.21e-02   1.78e-02  -2.55e-03  -2.95e-02
## 579   -2.05e-02   6.68e-03  -3.77e-02   8.16e-03   4.12e-02   3.35e-02   5.72e-02
## 580   -3.49e-02  -1.17e-02   5.14e-04  -7.74e-03   3.68e-02   1.67e-02  -6.85e-03
## 581   -3.72e-03  -6.82e-03   6.53e-05  -4.61e-03   1.31e-02   2.18e-03   1.66e-02
## 582   -7.23e-03   6.25e-03  -1.24e-03  -5.07e-03  -2.72e-03   9.20e-03  -1.24e-02
## 583    3.80e-04  -2.02e-04  -3.27e-04  -1.48e-05   2.02e-05   2.45e-04  -6.49e-05
## 584    6.00e-03  -7.17e-04  -5.00e-04  -3.36e-03  -6.85e-03   1.60e-03  -3.28e-03
## 585    7.42e-04   3.68e-03  -1.32e-02  -1.96e-03   3.82e-03   1.38e-03   5.19e-03
## 586   -3.57e-02  -6.32e-02  -6.07e-03   1.52e-02   5.39e-02  -2.91e-02   9.09e-03
## 587   -2.75e-02   9.45e-03   3.02e-02   3.49e-02  -9.09e-03  -7.45e-04  -2.55e-03
## 588   -1.85e-02   1.52e-02   9.38e-04   3.67e-03   8.42e-03   4.57e-04   7.90e-03
## 589    2.60e-04  -8.43e-03  -1.08e-03   1.15e-03  -6.05e-03  -7.98e-03   4.31e-03
## 590    7.84e-02   3.34e-04  -3.85e-03   1.24e-02   6.37e-03  -3.85e-02  -3.67e-02
## 591    1.20e-03  -2.89e-03  -2.32e-04   1.40e-03  -6.55e-03  -5.31e-04   1.08e-03
## 592    4.13e-02   7.27e-03  -8.63e-04   2.09e-02  -7.68e-02   4.28e-02  -7.86e-02
## 593   -1.25e-02  -4.69e-04   2.30e-03  -1.07e-03   1.78e-02   8.57e-03  -6.53e-04
## 594    2.37e-04   5.96e-05  -6.10e-06   2.17e-04  -2.05e-04  -6.05e-04   1.14e-04
## 595   -7.26e-03  -3.95e-03   4.25e-05   1.56e-03   3.51e-03   6.09e-03   1.81e-03
## 596    2.96e-02   7.46e-03  -1.53e-02   1.44e-02  -7.20e-02  -5.23e-02   5.63e-02
## 597    1.10e-03  -8.38e-04   4.12e-04  -1.74e-03  -5.79e-03   4.11e-03  -5.32e-03
## 598    2.81e-03  -1.46e-02   3.15e-04  -5.23e-03  -3.94e-03   1.31e-02  -1.30e-02
## 599    6.54e-02  -3.44e-02  -1.13e-03   2.39e-02   1.36e-02  -4.44e-02   1.78e-02
## 600   -3.80e-03  -1.82e-03   1.95e-04  -3.00e-03  -5.22e-03  -4.56e-03  -1.85e-03
## 601   -3.62e-04   1.03e-03  -5.98e-06  -4.60e-04  -4.36e-05   8.23e-04  -3.22e-04
## 602   -2.75e-02  -2.09e-02  -4.70e-02  -2.37e-03  -5.38e-04  -3.02e-02   5.36e-02
## 603   -1.24e-02   4.65e-02   1.56e-03  -1.32e-02  -8.81e-03   3.07e-02  -7.31e-03
## 604    7.02e-03  -5.65e-02  -1.59e-03  -1.10e-02   2.55e-02   1.76e-02   1.37e-02
## 605    6.37e-03  -1.25e-02  -1.03e-03  -6.71e-03  -4.24e-03  -3.00e-02   7.65e-03
## 606   -6.06e-02   3.32e-03  -4.27e-02  -2.64e-03   2.42e-02  -1.02e-02   4.54e-02
## 607    1.52e-02  -8.82e-03  -3.53e-02  -2.37e-03   2.71e-03  -2.21e-02  -1.10e-02
## 608   -2.33e-01   2.02e-01   1.60e-02   6.14e-02   9.32e-02   1.53e-02   9.25e-03
## 609   -3.10e-02   1.98e-01   3.43e-03   3.94e-02  -6.02e-02  -6.20e-02   9.24e-03
## 610    6.95e-03   6.86e-03  -1.85e-04  -2.10e-03   6.05e-03  -5.05e-03   3.40e-03
## 611   -6.60e-03   9.50e-03  -9.56e-04  -5.76e-03   1.58e-02   4.26e-03  -1.56e-03
## 612    1.40e-03   1.05e-03  -1.59e-05  -5.35e-04  -5.18e-04   2.65e-04  -3.52e-04
## 613    1.18e-02   2.80e-02   2.04e-03  -1.03e-02   4.12e-03   3.02e-02   2.03e-02
## 614    3.96e-04  -1.05e-03  -1.77e-04  -1.68e-03   8.15e-04   3.68e-03  -2.26e-03
## 615    2.03e-02  -6.15e-02   6.59e-02  -5.75e-03   7.31e-03  -3.27e-02   1.24e-02
## 616   -2.34e-03   5.49e-04   3.18e-03   3.71e-03   1.30e-03   9.91e-04  -1.50e-03
## 617   -7.22e-04   1.37e-03   4.72e-05   1.52e-03   5.43e-03   8.35e-03  -5.21e-03
## 618   -7.31e-03  -1.62e-02   4.89e-05  -5.03e-03   3.97e-03   6.66e-03  -1.45e-02
## 619   -5.77e-02   3.09e-02   5.03e-03  -4.94e-03   4.14e-02   2.25e-02   4.08e-02
```

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## 620   -5.85e-04 -2.65e-04  1.05e-04  7.11e-04 -8.08e-04 -1.52e-03 -2.06e-03
## 621   -5.22e-02 -2.15e-02 -2.47e-03 -1.58e-02 -5.05e-02 -7.73e-02 -5.95e-03
## 622   -5.12e-03  6.08e-03  1.37e-03 -2.30e-03 -9.87e-04  9.55e-03  6.64e-03
## 623   -4.67e-03  3.38e-03 -2.34e-04 -3.62e-03  1.23e-02 -2.80e-03  3.91e-03
## 624   -2.10e-02  1.36e-02 -2.13e-02 -8.86e-04 -5.51e-03  6.52e-03  8.34e-03
## 625   -2.92e-03  1.85e-02  3.74e-03 -2.01e-03  9.25e-03  6.18e-03  2.43e-02
## 626    2.89e-03 -2.36e-03  3.95e-04 -4.30e-03 -2.31e-03 -2.95e-04 -1.36e-02
## 627    7.98e-05  6.50e-04  8.64e-05 -2.23e-04  5.13e-04  2.18e-04 -3.46e-04
## 628    3.10e-03  1.26e-03 -3.30e-03  1.58e-04  2.20e-04 -4.22e-03 -1.03e-03
## 629    3.77e-03 -2.75e-04 -1.39e-03 -4.64e-03  9.05e-03 -6.62e-03 -9.31e-03
## 630   -6.11e-03  4.75e-03 -9.43e-04 -4.91e-03 -8.01e-03 -8.33e-04  5.19e-03
## 631   -7.05e-03  1.32e-02 -1.13e-03 -4.76e-03 -7.40e-03  9.49e-03 -1.03e-02
## 632    2.28e-02 -1.45e-02  2.04e-03 -5.30e-03 -3.74e-03  5.53e-03  2.75e-02
## 633    1.43e-03 -4.13e-02 -4.37e-02  1.47e-03 -4.62e-02  2.80e-02  3.14e-02
## 634    6.64e-05 -1.01e-02 -1.92e-03 -8.77e-03 -2.31e-02  4.09e-03  2.84e-02
## 635    5.32e-03  3.29e-02  2.99e-03 -7.33e-03  4.49e-02  2.73e-02 -6.72e-03
## 636    3.76e-03  3.19e-03 -1.81e-04 -2.41e-03  3.04e-03  7.76e-04 -5.90e-03
## 637   -3.55e-02 -9.30e-03  6.15e-02  6.29e-03 -7.36e-02  7.99e-02  5.78e-02
## 638    5.96e-03 -3.67e-04 -1.63e-02 -1.86e-02 -8.89e-03 -6.26e-03  7.80e-03
## 639   -5.79e-03  1.44e-02 -9.40e-05 -5.47e-03  5.45e-03  9.54e-03 -3.82e-03
## 640    1.50e-03 -1.19e-02 -2.73e-04 -1.87e-03 -8.11e-03  4.28e-03 -8.42e-04
## 641   -3.17e-02  1.76e-02  3.18e-02  3.64e-02 -1.40e-02  8.91e-03  1.90e-02
## 642   -1.76e-02  8.71e-03 -2.38e-02  1.51e-03  1.92e-02  9.59e-03  1.21e-02
## 643    6.98e-03 -1.81e-02 -1.68e-03 -7.73e-03  1.67e-02  1.08e-03  8.59e-03
## 644    6.51e-03  3.43e-03  1.71e-03 -1.09e-03 -6.30e-03  6.94e-03 -1.68e-03
## 645    1.21e-02  9.49e-03  1.23e-03 -5.12e-03 -1.28e-02 -2.63e-03 -1.53e-02
## 646    3.61e-02 -2.69e-02  1.08e-03  2.76e-02 -6.23e-02 -5.31e-02 -4.16e-02
## 647   -9.72e-04 -6.44e-04 -2.05e-04  5.58e-04  4.65e-05 -5.58e-04 -2.93e-03
## 648    7.57e-04  2.73e-03 -4.55e-04 -1.95e-03  1.52e-03 -8.27e-03 -5.42e-03
## 649    4.83e-03 -4.91e-04 -1.52e-02  5.76e-04 -1.07e-02 -1.72e-02 -3.66e-03
## 650   -7.71e-03 -2.43e-03 -3.42e-04  2.38e-03 -1.29e-02  1.17e-02  9.02e-03
## 651   -2.17e-03 -3.00e-03 -6.76e-03  3.65e-04  5.31e-03  5.10e-03 -6.21e-03
## 652    1.99e-02 -2.22e-02 -1.85e-04 -6.66e-03  1.70e-02  1.29e-02 -7.97e-04
## 653   -3.41e-02 -1.52e-02  7.73e-02  8.53e-02 -4.50e-02 -3.34e-02  5.30e-02
## 654   -1.00e-02 -3.20e-05  2.09e-02  2.40e-02 -3.89e-03  6.28e-03  1.22e-02
## 655    1.35e-03 -6.65e-05  9.62e-05  2.12e-03  7.05e-03 -4.11e-03  5.53e-03
## 656    4.21e-03  1.90e-03  7.85e-04 -5.98e-03 -9.62e-03  9.53e-03 -1.32e-02
## 657   -1.04e-02  1.48e-02 -8.01e-05  1.72e-02 -3.87e-02  6.29e-02 -5.06e-02
## 658   -8.87e-03  8.48e-03 -8.41e-04 -6.07e-03 -6.83e-03  2.04e-03  1.65e-02
## 659   -1.08e-02 -4.87e-02  4.00e-03 -1.03e-02  1.06e-02  2.00e-03  3.19e-02
## 660    4.52e-03  6.00e-03  3.20e-04 -7.26e-03 -2.35e-03  8.89e-03  2.39e-02
## 661   -5.82e-02  2.37e-01  8.76e-02  1.05e-02 -4.17e-03 -4.71e-02  5.76e-02
## 662    1.30e-02 -1.72e-02 -1.75e-03 -6.77e-03  1.51e-02  1.77e-03  1.66e-02
## 663    1.21e-01 -7.33e-02 -6.56e-04  2.45e-02 -3.64e-02 -4.46e-02  1.50e-02
## 664   -1.54e-02 -7.32e-02  4.00e-03  3.28e-02  9.69e-02  7.26e-02  8.13e-02
## 665    6.27e-03  7.60e-03  9.77e-04 -4.08e-03 -1.60e-02 -5.36e-03 -2.69e-03
## 666    2.58e-02 -6.86e-02 -2.08e-03 -1.35e-02 -4.40e-02  2.05e-02 -2.61e-02
## 667   -9.19e-03 -8.77e-02 -6.08e-03  2.27e-02 -2.57e-02 -5.20e-02 -4.88e-02
## 668    7.04e-02  4.13e-02  3.13e-03  2.84e-02  3.05e-02 -4.57e-02 -4.86e-02
## 669    2.98e-03  5.25e-03 -5.46e-04 -3.25e-03 -1.99e-03  6.08e-05 -1.81e-03
```

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## 670    4.92e-03   1.68e-02 -2.16e-03   1.58e-02   3.20e-02 -3.00e-02   6.08e-02
## 671    3.05e-03   4.94e-03 -1.02e-04 -9.18e-03   7.79e-03   1.25e-02   1.19e-02
## 672    2.30e-03 -1.04e-02 -1.54e-03 -8.34e-03   9.30e-03 -2.11e-03   9.54e-03
## 673    3.65e-03 -1.56e-02 -1.30e-03 -7.49e-03   1.07e-02 -9.86e-03 -4.33e-03
## 674   -2.81e-02 -4.95e-03   4.00e-03 -1.12e-02 -4.50e-02   3.74e-02 -4.18e-03
## 675   -7.74e-04 -2.09e-02 -1.36e-04 -6.34e-03 -1.79e-02   5.80e-03 -1.80e-04
## 676   -1.73e-02   1.83e-02   1.20e-03 -5.60e-03   2.39e-02   3.53e-03   1.08e-02
## 677    1.53e-02   2.87e-03 -6.11e-04 -6.75e-03 -8.04e-03 -1.51e-02 -1.57e-02
## 678   -5.92e-03   6.09e-04   8.37e-04 -1.11e-03   2.71e-03   1.39e-03   7.12e-03
## 679    2.61e-03 -4.31e-03 -1.15e-04 -1.69e-03 -6.59e-03 -6.02e-03 -5.40e-03
## 680    1.23e-03 -4.67e-04 -1.89e-03 -2.27e-03   5.40e-04   9.95e-04   8.75e-04
## 681    2.74e-04 -5.61e-03   8.07e-04 -5.80e-03   2.27e-02   1.57e-03   8.35e-03
## 682   -2.06e-03   1.41e-03   4.66e-04   2.61e-03   1.11e-02 -7.43e-03   1.05e-02
## 683   -5.62e-03   1.13e-03   1.68e-02   1.98e-02 -6.46e-03   7.53e-03 -2.31e-03
## 684    2.94e-02 -2.68e-02 -1.98e-04   1.84e-02   9.68e-03   5.05e-02   5.16e-03
## 685   -2.55e-02 -5.67e-03 -2.43e-03 -9.78e-03   6.71e-03 -2.18e-03   2.85e-02
## 686   -3.12e-02   1.63e-02 -3.22e-02 -1.08e-03 -3.23e-02   2.29e-02 -3.85e-03
## 687   -1.11e-02 -1.93e-03   2.99e-03 -3.05e-03   1.92e-02   4.07e-03 -1.63e-02
## 688    2.48e-03   2.02e-03   1.43e-04 -1.43e-03 -1.13e-03   3.14e-03 -1.20e-03
## 689    3.76e-02 -4.69e-02 -2.87e-03   1.50e-02 -2.40e-02   5.57e-02   3.35e-02
## 690    5.01e-02 -6.03e-02 -2.63e-03   1.67e-02 -7.17e-02 -2.99e-02 -6.73e-02
## 691   -3.04e-02   2.00e-02   2.71e-03 -8.24e-03   1.43e-02 -6.07e-03 -2.38e-02
## 692    1.11e-02 -3.95e-02 -3.83e-02 -1.80e-03 -4.42e-02 -3.93e-03 -2.49e-02
## 693    1.36e-03   2.88e-03   3.23e-04 -2.86e-03   6.60e-03   6.73e-03 -2.17e-03
## 694    4.01e-02 -3.10e-02 -7.22e-03   2.19e-02 -4.00e-02 -4.89e-02   7.27e-03
## 695   -1.02e-02 -5.58e-03 -8.98e-04 -8.82e-03 -1.53e-02   1.32e-02   1.12e-02
## 696    1.43e-01 -3.63e-02 -2.18e-03   2.56e-02 -1.22e-02 -5.75e-02 -8.59e-02
## 697    8.79e-03   1.20e-02 -1.93e-02 -2.29e-02 -5.09e-04 -6.04e-03   1.80e-03
## 698    1.32e-02   3.34e-03 -1.81e-02 -3.70e-04 -1.89e-02 -1.73e-02 -5.44e-03
## 699    9.94e-03 -2.67e-03 -5.46e-04 -3.66e-03 -7.82e-03 -7.67e-03 -2.45e-03
## 700   -9.40e-03   4.65e-03   2.40e-04   4.77e-03   5.67e-03 -1.49e-02   2.07e-02
## 701   -1.56e-01   2.68e-01   8.07e-03   3.91e-02 -8.93e-02 -5.99e-02   8.94e-02
## 702   -6.38e-03   6.60e-03   6.96e-04   3.17e-03   7.27e-03 -3.74e-03 -3.64e-04
## 703    5.29e-04   1.16e-03 -9.26e-05 -8.49e-04   1.71e-03   2.32e-04 -2.25e-04
## 704   -5.64e-03 -1.64e-02   5.44e-02   6.17e-02   3.28e-02 -2.17e-04 -3.38e-03
## 705   -2.49e-02 -5.49e-03   2.38e-03   1.08e-02 -6.63e-05 -1.60e-02   2.23e-02
## 706    9.28e-04 -1.00e-03 -2.30e-05 -5.63e-04 -3.85e-04   1.09e-03   1.90e-03
## 707    2.13e-02 -7.99e-02 -1.54e-01 -1.80e-01   8.53e-02   9.01e-02 -3.73e-02
## 708    2.06e-02 -5.22e-03 -1.02e-02 -4.21e-04 -1.06e-02 -5.76e-03 -7.27e-04
## 709    5.39e-03 -2.69e-03 -2.49e-02 -2.85e-02   8.72e-03 -2.72e-03 -1.60e-02
## 710    6.31e-02   4.31e-04 -1.05e-01 -1.19e-01 -4.19e-02 -5.06e-03   4.72e-03
## 711   -1.14e-02   3.94e-04   1.89e-02   2.25e-02   1.19e-03 -9.31e-03 -8.20e-03
## 712   -1.03e-02 -1.02e-02 -1.42e-04   1.57e-02   1.44e-02   2.51e-03   4.26e-02
## 713    1.12e-03 -4.32e-03   1.92e-05 -7.57e-03   1.27e-02 -9.84e-03   9.67e-03
## 714   -1.43e-02   1.35e-02   9.12e-04   4.81e-03   2.57e-03 -8.50e-03   1.09e-02
## 715   -1.44e-02 -2.06e-02   1.16e-03   6.63e-03   6.36e-03 -1.75e-02   2.53e-02
## 716    1.50e-02   1.22e-03 -2.67e-02   5.11e-03   1.16e-03   2.55e-02 -3.68e-03
## 717   -1.36e-02   1.08e-03   1.92e-02   1.38e-03 -5.27e-04   2.07e-04 -1.97e-02
## 718   -1.02e-02   9.84e-03 -1.99e-05 -5.75e-03 -1.20e-02 -1.35e-02 -3.28e-03
## 719   -4.64e-03 -1.85e-02   3.06e-02   3.55e-02   1.68e-02 -1.78e-02 -1.17e-02
```

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## 720     3.39e-02 -2.83e-02  4.51e-04 -7.17e-03 -8.77e-03  1.02e-02 -1.62e-02
## 721     5.69e-02 -2.91e-02 -9.18e-03  1.12e-02 -7.16e-02  6.85e-02 -7.40e-02
## 722     6.84e-03 -1.86e-03  1.51e-05 -9.69e-04 -2.35e-04 -5.27e-03 -3.55e-03
## 723     6.94e-03 -1.45e-02 -1.91e-02 -1.95e-04 -1.87e-02 -1.38e-03 -5.08e-03
## 724    -1.55e-02  1.86e-02  2.22e-03  7.51e-03 -1.05e-02 -2.30e-03  1.72e-02
## 725    -2.73e-03  1.30e-02 -2.14e-03 -8.01e-03 -1.13e-02 -1.08e-02 -1.18e-02
## 726     3.82e-02  1.99e-02  6.82e-03  2.79e-02 -2.64e-02  2.59e-02  1.02e-02
## 727     1.33e-03  8.25e-04 -1.92e-02  1.22e-03 -2.10e-03  1.61e-02 -4.70e-03
## 728    -2.67e-02  2.71e-02  4.31e-02  4.84e-02  2.09e-02  1.00e-02  9.71e-03
## 729    -8.12e-03  1.49e-02  1.04e-04  3.73e-03  1.73e-02  1.23e-02  2.80e-03
## 730    -2.20e-02  2.33e-02  7.90e-04 -1.48e-02  1.89e-02 -5.76e-02 -9.09e-04
## 731    -2.11e-02  1.46e-02  3.40e-03 -2.86e-03  3.67e-02  4.66e-03  1.44e-02
## 732     1.80e-02 -4.48e-02 -1.78e-03  1.28e-02  3.12e-02  8.41e-03  3.87e-02
## 733     3.40e-02 -2.98e-03  6.57e-02 -1.24e-03 -7.84e-02 -2.40e-02 -2.88e-02
## 734     2.43e-05 -1.30e-02 -8.98e-04  3.21e-03  4.84e-03 -8.57e-03  1.11e-02
## 735    -7.89e-02  4.70e-02 -1.19e-03 -1.28e-02  4.71e-02  7.76e-03  1.64e-02
## 736    -9.80e-03 -7.96e-03  1.71e-03 -7.64e-03  2.53e-02  9.80e-03  3.17e-02
## 737     1.68e-05  2.17e-06  1.25e-05 -4.07e-04 -1.52e-03  6.03e-04 -2.48e-04
## 738     2.26e-03 -9.74e-03 -1.52e-04 -4.79e-03  5.36e-03  1.77e-03 -1.11e-02
## 739    -3.13e-04 -3.69e-04  1.88e-05  2.90e-04 -3.43e-04 -5.71e-04  6.46e-04
## 740     7.80e-04  6.15e-03 -1.55e-04 -4.12e-03 -5.02e-03  8.13e-03  1.29e-02
## 741     9.43e-04 -4.86e-03 -1.14e-03 -4.37e-03  8.52e-04 -1.35e-03  4.11e-03
## 742    -9.81e-03 -8.62e-03 -3.87e-04  2.04e-03 -1.38e-02 -4.47e-03  1.20e-02
## 743     7.23e-03 -1.43e-02 -1.06e-04 -2.92e-03  2.40e-04  9.01e-05  1.05e-02
## 744     5.35e-03 -1.22e-02  2.54e-03 -5.25e-03  3.96e-03  1.61e-02 -1.35e-03
## 745     1.34e-01 -4.43e-02  1.74e-03  2.12e-02  4.14e-02  4.38e-03 -7.75e-02
## 746     1.62e-02 -5.04e-02 -3.33e-02  3.07e-03  4.40e-02 -2.69e-02 -3.94e-03
## 747     9.09e-03  4.62e-04 -2.00e-02 -2.38e-02 -1.33e-02 -2.95e-03 -5.90e-03
## 748    -2.70e-02  3.14e-02  7.29e-03 -5.12e-03 -1.53e-02  1.82e-02  2.34e-02
## 749     9.95e-02 -4.93e-02 -1.06e-01 -1.22e-01 -4.98e-02  1.02e-01 -2.53e-02
## 750     6.09e-02  2.54e-02  1.92e-03  3.44e-02 -9.73e-02 -6.91e-02 -1.26e-01
## 751     3.01e-03  6.30e-04  4.20e-05 -5.93e-04 -1.86e-03 -2.85e-03 -1.33e-03
## 752    -8.71e-04  2.62e-02 -5.68e-02 -6.73e-02 -3.63e-02 -2.35e-02  2.95e-02
## 753     1.32e-02 -3.92e-02 -5.89e-03  3.10e-02  2.59e-02  5.94e-02  1.05e-02
## 754     1.13e-02  1.19e-02 -4.24e-02  5.14e-03 -2.21e-02 -5.64e-02 -4.07e-02
## 755    -1.58e-02 -6.68e-03  4.16e-02  4.77e-02 -1.02e-02  4.06e-03  9.47e-03
## 756    -1.78e-02 -1.03e-02 -8.55e-04  2.36e-03  1.17e-02  5.71e-03  1.68e-02
## 757    -9.94e-03  4.35e-03  2.76e-02  3.15e-02 -8.93e-03 -2.80e-02 -1.29e-02
## 758     3.82e-03 -4.89e-03 -6.17e-04  1.81e-03 -8.89e-03 -4.74e-03 -2.37e-03
## 759     3.89e-03 -2.84e-02  2.09e-04 -2.71e-03 -5.16e-03  9.92e-03  7.16e-03
## 760     4.14e-03 -4.51e-02 -1.32e-03 -1.10e-02 -4.65e-03 -4.11e-02  1.48e-02
## 761    -5.13e-03 -3.30e-04 -6.83e-03  3.56e-04  8.46e-03  5.38e-03 -1.37e-03
## 762     2.83e-02 -1.27e-02  4.25e-03  3.46e-02 -3.09e-02  4.20e-02 -9.87e-02
## 763     5.85e-02 -4.26e-02  4.15e-02 -8.32e-03 -4.06e-02 -3.63e-02 -6.04e-02
## 764     3.41e-02 -1.34e-02  3.13e-04 -8.78e-03 -2.79e-02 -2.03e-04 -4.35e-03
## 765     1.10e-02  3.08e-03 -7.64e-04 -4.30e-03 -7.15e-03 -1.31e-05 -1.14e-02
## 766     1.49e-03 -4.02e-03 -1.43e-02  4.89e-04 -9.61e-03  7.42e-03 -2.87e-03
## 767    -5.13e-03  7.33e-03  2.11e-03 -2.83e-03 -2.21e-02  1.23e-02  1.03e-02
## 768    -1.36e-02 -5.22e-03  2.32e-04 -5.97e-03  2.36e-02  1.12e-02 -1.62e-02
## 769    -8.17e-03 -1.66e-02 -1.34e-03 -7.08e-03  2.25e-02 -3.76e-02 -6.20e-03
```

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## 770   -2.61e-02   1.70e-02  -3.10e-02  -3.20e-03  -7.26e-03   2.13e-02   3.39e-02
## 771   -9.56e-03  -6.97e-03   1.74e-03   7.30e-03  -1.85e-02  -1.36e-02   1.87e-02
## 772    5.23e-04  -1.74e-02  -6.75e-04  -3.48e-03  -6.10e-03   5.24e-03  -6.24e-04
## 773    7.82e-03  -1.55e-02  -1.14e-02   8.35e-04  -8.44e-03   3.37e-04   1.29e-02
## 774   -8.22e-03   2.54e-03  -5.83e-04  -6.08e-03  -1.61e-03  -4.18e-03  -1.20e-02
## 775   -1.17e-02  -1.45e-03   1.71e-02   2.04e-02   5.47e-03   4.78e-03  -8.01e-04
## 776    7.31e-04   1.62e-03  -6.26e-04  -3.00e-03   6.26e-03  -1.17e-02  -2.08e-03
## 777    1.25e-02  -6.14e-02   5.51e-02  -2.77e-03  -2.14e-03   1.03e-03   4.85e-02
## 778    1.03e-01  -4.62e-02   1.80e-03   2.21e-02   6.93e-02   8.75e-03   7.68e-03
## 779    1.33e-02  -6.33e-03  -1.19e-03  -6.03e-03  -3.85e-03   3.86e-03  -1.08e-02
## 780   -1.78e-02   7.74e-02  -1.35e-02   1.72e-02   9.43e-02  -3.36e-02  -1.12e-01
## 781    1.45e-01  -4.67e-02  -1.50e-01  -1.75e-01   9.75e-02   1.07e-01  -3.97e-02
## 782   -4.99e-02   2.36e-02   8.97e-04  -7.83e-03   3.52e-02   2.34e-02   3.65e-02
## 783   -8.87e-03   6.78e-03  -6.76e-04  -4.46e-03  -1.38e-02  -2.32e-02  -7.26e-03
## 784   -2.53e-04   4.04e-03  -4.41e-04   1.25e-03  -3.38e-03  -7.20e-04  -2.77e-03
## 785   -7.20e-04   1.44e-03  -8.86e-05  -9.80e-04   2.57e-03  -1.75e-03  -9.15e-04
## 786    1.21e-02  -1.32e-03  -1.03e-03  -5.97e-03  -1.72e-02  -1.32e-02   1.72e-02
## 787   -2.82e-02   8.23e-03   4.24e-02   5.04e-02  -2.10e-02   2.90e-03   2.55e-02
## 788   -1.04e-03   8.24e-04   1.30e-03  -1.65e-04   5.41e-04  -8.39e-04   1.22e-03
## 789    1.59e-03   5.50e-03   2.02e-04  -2.68e-03  -1.52e-03  -5.64e-04  -9.90e-04
## 790    2.14e-02  -1.90e-02  -2.78e-03   2.21e-02   1.16e-01  -7.48e-02  -4.29e-02
## 791   -4.24e-05  -5.83e-04   2.23e-04   8.71e-04  -4.95e-04  -6.62e-04   1.32e-03
## 792   -9.12e-02   1.20e-02   2.77e-03   2.70e-02   6.26e-02  -4.42e-02   6.10e-02
## 793   -4.39e-03  -2.55e-02   7.19e-02   1.15e-02   1.52e-02   1.16e-01  -7.28e-02
## 794   -1.66e-02   8.80e-03  -1.63e-03  -1.07e-02  -3.34e-03  -1.30e-02   2.76e-02
## 795   -1.76e-02  -8.00e-03  -3.05e-02  -2.42e-04   7.79e-03   1.48e-02   3.25e-02
## 796    1.05e-02  -2.41e-03  -8.21e-04  -9.51e-03   2.58e-02  -2.50e-03  -2.14e-02
## 797   -2.27e-02  -8.46e-02  -7.90e-03   2.48e-02   6.66e-02  -3.69e-02   6.41e-02
## 798    2.99e-02  -2.73e-02   1.05e-02   4.13e-02   7.59e-02   9.06e-02  -9.57e-02
## 799    9.82e-03   7.90e-03   2.38e-04   1.55e-02   2.20e-02   5.68e-02  -5.05e-02
## 800   -1.93e-03   2.28e-03   8.25e-05  -2.46e-03   4.06e-03   4.70e-03  -8.13e-03
## 801    6.88e-02  -1.17e-03   7.84e-02   9.23e-03   3.26e-02  -4.81e-02  -8.48e-02
## 802   -8.81e-02   1.38e-01   6.97e-02  -1.28e-03   2.62e-02  -5.37e-02   5.27e-02
## 803    3.05e-03  -2.53e-03  -1.49e-02  -5.03e-04  -4.68e-03   3.19e-03  -1.20e-02
## 804   -4.89e-03   4.03e-04   8.55e-03   9.99e-03   1.22e-03   2.56e-03  -9.47e-04
## 805    4.06e-03  -2.61e-03  -1.16e-02  -1.38e-02   3.91e-03  -4.43e-03  -6.78e-03
## 806    5.16e-03   6.21e-03  -1.45e-02  -1.67e-02   3.88e-03  -6.58e-04  -3.98e-03
## 807    1.43e-02  -1.80e-02  -4.04e-04  -5.06e-03  -6.51e-03   3.41e-03   8.44e-03
## 808    8.54e-03  -8.92e-03  -1.96e-03  -9.21e-03   1.46e-03  -3.61e-04  -9.28e-04
## 809   -9.63e-04  -7.15e-04   8.21e-05   3.75e-04   3.28e-04   1.32e-03   2.71e-04
## 810   -2.76e-03  -6.57e-03   8.55e-04   3.22e-03   1.04e-03  -5.32e-03   7.00e-03
## 811    3.80e-03   5.29e-04  -2.71e-04   1.17e-03  -5.20e-03  -2.95e-03  -7.48e-03
## 812   -2.42e-03  -1.49e-03   3.16e-05  -5.16e-03   1.82e-02   1.05e-02  -1.29e-02
## 813   -1.56e-04  -7.59e-04  -1.90e-02   2.63e-03  -8.40e-03  -3.14e-02  -4.69e-03
## 814    2.37e-04  -5.54e-02   9.37e-02   9.31e-03  -9.81e-02  -7.03e-02  -1.08e-01
## 815    2.08e-03  -2.62e-04  -4.65e-04  -2.21e-03  -6.57e-03  -3.41e-03  -8.57e-04
## 816   -2.49e-02   4.27e-02   3.82e-03  -1.38e-02  -2.44e-02   3.33e-02  -3.41e-02
## 817   -1.48e-02  -6.15e-03   2.50e-02   2.96e-02   9.13e-03   3.96e-04  -3.19e-03
## 818   -1.42e-03   1.42e-03   4.64e-03   5.35e-03   2.81e-03  -1.83e-03   2.49e-03
## 819    7.00e-03   2.40e-04  -1.37e-02   7.07e-04   1.19e-03  -1.46e-02  -3.89e-03
```

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## 820   -4.06e-02   1.44e-02  -8.71e-04  -8.14e-03  -3.21e-02   1.94e-02   3.00e-02
## 821    2.06e-03  -1.48e-03  -4.14e-03  -5.29e-04  -2.58e-03  -8.76e-04  -3.16e-03
## 822   -2.67e-04   7.70e-04   1.42e-04   8.46e-04  -3.77e-03  -4.87e-04   2.62e-03
## 823    2.65e-03  -5.24e-03  -2.21e-02   2.13e-04  -8.80e-03   1.53e-02  -2.03e-02
## 824   -1.61e-02   1.26e-02  -2.17e-02  -1.82e-04   1.46e-02  -2.52e-03  -1.95e-02
## 825   -1.23e-02   1.86e-03  -2.07e-03  -1.71e-02   3.99e-02  -6.93e-02   1.69e-02
## 826   -2.04e-02   2.89e-02   2.38e-03  -9.25e-03   9.21e-03   9.18e-03   1.91e-02
## 827    3.86e-04  -5.33e-04   1.01e-04  -2.75e-04   8.65e-04   8.02e-04  -1.08e-04
## 828   -2.88e-02   9.81e-03  -4.75e-02  -3.89e-03   1.13e-03   1.08e-02  -3.13e-03
## 829    1.19e-01  -1.00e-01  -1.64e-01  -1.88e-01  -8.46e-02  -1.01e-02   2.08e-02
## 830    1.56e-02   1.10e-02  -3.42e-03   1.18e-02  -1.21e-02   1.38e-03  -6.39e-02
## 831   -1.36e-02  -2.73e-02   4.19e-03  -5.98e-03   4.19e-02  -1.32e-02   1.99e-02
## 832    2.80e-02   9.12e-03   8.31e-02  -1.94e-03   7.48e-03   4.43e-02   2.30e-02
## 833   -5.53e-04  -2.86e-03  -1.42e-03  -5.98e-03   9.18e-03  -1.82e-02  -2.43e-03
## 834   -1.22e-02   8.54e-03   6.40e-06  -5.10e-03   1.82e-02   3.88e-03  -1.50e-02
## 835    3.09e-03  -9.97e-04  -5.36e-04  -2.64e-03  -7.54e-03   7.53e-04   3.18e-03
## 836   -6.66e-03  -7.01e-03  -2.31e-04  -6.06e-03   1.25e-02   1.82e-03  -7.94e-03
## 837    1.29e-01  -6.63e-02   7.22e-03   3.47e-02  -6.47e-02   1.03e-01   8.29e-02
## 838   -4.26e-04   4.49e-05  -1.51e-02   8.31e-04   4.46e-03  -9.48e-04   3.93e-03
## 839    3.95e-02   4.72e-04   5.22e-02   1.18e-04  -1.80e-02   1.27e-02   4.42e-03
## 840   -9.64e-04  -1.88e-02   1.31e-04  -6.21e-03   1.35e-03   7.58e-03   1.16e-02
## 841   -1.50e-03   4.19e-04   5.66e-05  -1.47e-03  -2.11e-03   3.23e-03  -4.42e-03
## 842   -4.77e-04   2.66e-02  -6.88e-04  -1.01e-02   1.63e-02  -4.16e-02  -2.77e-02
## 843    6.58e-03  -1.66e-02  -5.06e-03   1.74e-02   8.68e-02   1.82e-02   9.60e-03
## 844   -6.16e-03  -6.80e-03  -2.59e-04   1.86e-03   6.84e-03  -4.50e-03  -7.85e-03
## 845    6.22e-04   6.92e-03  -4.71e-04  -3.94e-03  -1.48e-03  -8.65e-04  -3.37e-03
## 846   -2.46e-02   2.61e-02  -4.68e-02   4.55e-03  -3.92e-04  -6.79e-02  -1.24e-02
## 847    8.42e-05   2.38e-03  -5.33e-04  -2.05e-03  -1.14e-04   2.67e-03  -3.91e-04
## 848    6.28e-03   7.90e-03  -2.59e-02  -9.96e-04   3.50e-03   2.03e-02  -2.35e-02
## 849    4.12e-03  -8.67e-03  -1.45e-02  -7.78e-04   3.33e-03   5.12e-03  -1.17e-02
## 850    4.23e-02   8.94e-02   8.38e-03   3.20e-02   8.77e-02   3.68e-05  -8.49e-02
## 851   -9.10e-03  -2.63e-03   1.68e-02   1.98e-02  -8.08e-04   5.77e-03  -1.56e-03
## 852   -4.93e-03   3.03e-03   5.16e-04   2.27e-03  -2.37e-03  -3.47e-03   8.22e-03
## 853    1.25e-03  -3.00e-03  -1.90e-04   1.25e-03   4.89e-03  -1.13e-03  -2.26e-03
## 854   -4.75e-03   3.83e-02  -1.22e-03  -1.26e-02   8.09e-03   7.38e-04  -9.15e-03
## 855    1.65e-02  -3.93e-02   1.05e-03  -7.57e-03  -3.73e-02   7.48e-03   3.95e-02
## 856    3.33e-03  -4.53e-04   2.81e-04   2.97e-03   2.65e-03  -6.41e-03   8.12e-03
## 857   -6.58e-02   4.06e-02   8.10e-04  -1.28e-02  -3.36e-03   2.21e-02   4.65e-02
## 858   -4.73e-02   9.96e-02  -5.07e-03   1.71e-02   4.40e-02   1.00e-02   5.64e-03
## 859   -3.01e-02   9.59e-03   3.82e-03   1.11e-02   1.67e-02  -4.07e-03   2.26e-02
## 860   -3.25e-02   2.16e-02  -6.83e-04  -1.72e-02  -1.04e-02  -2.09e-02   2.46e-02
## 861    4.89e-02  -5.01e-02   5.76e-02  -3.68e-03   5.13e-02  -3.19e-02   5.40e-03
## 862   -7.61e-04  -2.02e-04   4.12e-05   2.98e-04   1.08e-03  -6.40e-04   1.88e-04
## 863   -2.79e-02  -3.25e-02   4.87e-02   5.66e-02   3.13e-02  -2.08e-02  -2.40e-02
## 864   -6.96e-04  -7.81e-04   4.01e-04  -1.86e-03   1.11e-02   5.60e-03   3.29e-03
## 865    1.28e-01   6.79e-02  -1.44e-01  -1.71e-01   9.59e-03  -4.15e-02  -8.98e-02
## 866    7.43e-03   8.14e-03  -2.11e-03  -7.50e-03  -1.47e-02  -2.70e-02  -3.00e-03
## 867    1.05e-03  -1.63e-02  -2.17e-02   6.57e-04  -1.59e-02   1.47e-02   1.09e-02
## 868    1.95e-06   4.84e-04  -5.89e-04   1.21e-04  -5.77e-04   3.32e-04  -5.64e-04
## 869   -1.33e-02   1.13e-02  -9.20e-04  -7.16e-03  -1.74e-02  -2.31e-02  -2.13e-02
```

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## 870   -8.25e-04 -4.43e-03  2.23e-05  1.83e-03  1.13e-02  6.48e-03  9.00e-03
## 871    3.95e-03  1.45e-02  1.88e-03 -3.48e-03 -2.37e-02 -1.87e-02 -4.58e-03
## 872    5.26e-02 -6.05e-02  6.97e-04  2.12e-02  1.90e-02  5.64e-02  8.67e-02
## 873   -5.40e-03  7.50e-03 -2.48e-02  9.29e-04 -1.38e-02 -3.34e-02  1.02e-02
## 874   -3.77e-03 -3.84e-03 -1.29e-03 -4.03e-03 -1.78e-03  1.59e-03 -1.16e-03
## 875   -2.12e-03  3.13e-03 -3.51e-04 -2.50e-03 -3.96e-04  1.38e-03 -6.68e-04
## 876    7.76e-03 -1.82e-03 -4.34e-04 -3.30e-03  5.33e-03 -9.99e-03 -5.21e-03
## 877    2.17e-03  2.31e-02  8.46e-04 -7.58e-03  5.24e-03 -2.57e-02 -5.27e-03
## 878    1.00e-03  8.39e-03  4.33e-04  3.29e-03 -1.26e-02 -5.22e-03  8.66e-03
## 879   -4.20e-03  6.70e-03 -2.77e-02 -3.34e-02 -1.78e-02 -1.02e-02  1.31e-02
## 880   -5.52e-03  7.50e-03  1.12e-04  1.21e-03 -7.09e-04 -6.84e-04 -1.83e-03
## 881    2.21e-03 -8.16e-03 -3.67e-02 -1.60e-03  4.20e-02 -1.06e-02 -1.10e-02
## 882    1.24e-03  7.29e-03 -2.91e-02  1.09e-03 -3.07e-02  2.04e-02 -2.18e-02
## 883   -1.36e-02  2.58e-02 -3.39e-03 -1.63e-02  3.14e-02  3.20e-02 -3.48e-03
## 884   -2.87e-03  2.84e-03  4.32e-04 -1.03e-03  5.57e-03  1.19e-04  4.72e-03
## 885    1.30e-03 -1.32e-02 -1.61e-03 -6.96e-03  1.91e-02 -2.98e-03  7.79e-03
## 886    1.24e-03  1.15e-02 -1.29e-04 -6.06e-03 -1.76e-02 -1.89e-03 -2.55e-03
## 887    8.82e-03  1.63e-02  1.28e-03 -4.61e-03 -2.20e-02  1.58e-02 -1.53e-02
## 888   -3.18e-02  2.86e-02 -5.09e-02  1.26e-02  3.96e-02 -8.88e-02  6.47e-02
## 889   -1.53e-02  9.15e-03  3.01e-02  3.44e-02 -1.25e-02  3.00e-03 -3.17e-03
## 890   -7.08e-02  4.35e-02  5.36e-03 -1.24e-02 -2.96e-02 -1.85e-02  6.62e-02
## 891    3.10e-03 -3.53e-03  6.62e-03 -5.69e-04 -6.74e-05 -5.25e-03  6.42e-03
## 892   -1.33e-04  1.62e-04 -1.17e-05  5.32e-05  1.09e-04 -1.21e-04 -2.13e-04
## 893    2.13e-02 -5.72e-02 -9.59e-02 -1.08e-01 -2.39e-02 -4.98e-03 -5.95e-02
## 894    2.13e-03  1.35e-03 -4.42e-04 -3.21e-03 -2.52e-03  5.73e-03  9.08e-03
## 895   -1.66e-02 -2.05e-02 -3.29e-03  2.01e-03 -1.92e-02 -1.74e-02  3.74e-02
## 896   -1.92e-02  7.40e-03  2.22e-03 -6.38e-03 -3.43e-02 -4.93e-03 -3.97e-03
## 897    5.12e-03  5.31e-03 -2.60e-03 -9.82e-03 -1.43e-02 -3.44e-02 -6.88e-03
## 898    5.21e-03 -1.66e-02 -4.79e-04 -2.93e-03  4.93e-03  3.45e-03 -1.25e-03
## 899    1.12e-04 -7.70e-03  9.94e-04  3.49e-03  1.22e-03 -7.05e-03  3.97e-03
## 900    6.24e-04 -2.89e-05 -2.92e-05 -4.30e-04 -1.01e-03  8.30e-04  2.19e-03
## 901   -1.29e-02  3.05e-04 -1.04e-02  1.61e-03  7.92e-03  5.78e-03 -2.56e-03
## 902    3.20e-03 -1.80e-02  6.10e-04 -2.44e-03 -3.87e-03  6.67e-03 -1.04e-02
## 903   -5.91e-03  6.08e-03 -1.98e-04 -4.33e-03 -7.74e-03  4.98e-03  1.41e-02
## 904    9.57e-03  1.17e-02  5.28e-04 -8.81e-03 -2.44e-02  3.88e-03 -2.42e-03
## 905   -1.52e-03 -7.51e-04 -1.86e-05  7.72e-04 -4.60e-04 -1.99e-03  2.75e-03
## 906    1.09e-03 -6.36e-03  2.24e-03  5.46e-03 -4.45e-03 -8.50e-03  1.21e-02
## 907    8.76e-03 -3.10e-03 -1.70e-04 -2.79e-03 -8.35e-03 -9.58e-03 -3.16e-03
## 908   -2.36e-03 -2.74e-03 -2.74e-04  2.25e-03  6.44e-03 -4.19e-03 -4.54e-03
## 909   -4.00e-04 -1.10e-04 -2.13e-06  1.22e-04 -2.37e-04 -9.40e-06  2.88e-04
## 910   -2.08e-02  5.63e-02  8.22e-03 -1.15e-02  4.90e-02 -7.79e-02  2.74e-02
## 911    2.05e-03  6.48e-03 -1.23e-04 -2.62e-03  6.59e-03  6.26e-03 -7.33e-03
## 912    1.58e-02 -1.15e-02  3.38e-02  3.51e-03 -6.76e-03  4.47e-02  4.65e-03
## 913   -1.55e-02  3.78e-02  4.37e-03 -1.10e-02  1.86e-02  2.12e-02 -5.71e-03
## 914    3.55e-03  1.25e-02  1.30e-03  2.37e-02  1.08e-01 -5.14e-02 -9.38e-02
## 915   -2.99e-02 -2.60e-03  6.57e-02  7.17e-02  3.36e-02  6.08e-03 -2.17e-02
## 916    8.94e-02 -4.24e-02  5.09e-02  3.65e-03 -4.69e-02  1.73e-03 -5.13e-02
## 917    5.54e-03 -2.98e-03  1.58e-04  2.28e-03 -1.14e-02 -3.95e-03  9.04e-03
## 918   -9.79e-03 -1.60e-02  4.32e-03 -1.04e-02  5.29e-02  3.35e-02 -3.70e-03
## 919    2.67e-02 -1.33e-03 -2.37e-02 -1.37e-03  2.33e-02  2.72e-03 -2.12e-02
```

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## 920   -2.39e-04   4.64e-04   1.71e-06   1.17e-04   4.41e-04   3.54e-04   3.35e-04
## 921   -4.58e-05   6.18e-03  -1.17e-02  -1.34e-03   1.33e-02  -1.00e-02  -1.87e-03
## 922   -4.86e-02   1.96e-02  -4.42e-02   5.29e-03  -1.09e-03   3.56e-02  -3.83e-02
## 923   -4.21e-03  -1.68e-03   4.04e-04   2.65e-03   5.59e-03  -3.31e-03   1.71e-03
## 924   -5.07e-03   5.45e-03  -1.23e-02   2.59e-04   2.97e-03  -1.79e-03  -2.03e-03
## 925    4.68e-03  -1.05e-02   2.37e-03  -6.85e-03   4.74e-03   8.18e-03  -3.32e-03
## 926    1.23e-02   1.76e-02   5.63e-03  -3.12e-03   1.36e-02   1.20e-02   1.54e-02
## 927    2.49e-03  -5.73e-05  -6.29e-05  -2.00e-03   6.48e-04   1.53e-03  -3.57e-03
## 928   -1.88e-02   1.12e-02   3.87e-03  -5.57e-03   1.71e-02   1.82e-02   1.09e-04
## 929   -5.24e-02   1.11e-01   2.57e-03   3.66e-02  -3.62e-02   5.14e-02  -1.28e-01
## 930   -2.59e-02   8.53e-03  -3.95e-02   2.93e-03   4.77e-02   2.49e-02  -3.39e-02
## 931   -1.64e-02  -8.95e-02  -4.58e-02  -6.01e-03  -2.59e-02   7.26e-03   2.11e-02
## 932   -6.73e-03   1.64e-02   5.12e-02   5.74e-02  -4.65e-03   4.13e-03  -3.32e-03
## 933    5.48e-02  -5.84e-02  -4.01e-03   2.73e-02  -3.22e-03  -1.20e-02  -5.18e-02
## 934   -2.75e-02   1.26e-02   1.53e-03  -6.20e-03   7.03e-03   2.00e-02  -2.54e-02
## 935   -2.45e-02   1.45e-02   1.53e-04  -9.10e-03   2.70e-02   2.04e-02  -2.50e-02
## 936   -1.78e-02  -6.58e-03  -9.07e-04   4.88e-03  -8.20e-03  -1.48e-03   4.29e-03
## 937    2.20e-02   8.90e-03  -3.12e-02   7.91e-04   2.43e-02  -4.14e-02   9.52e-03
## 938   -8.72e-03   2.30e-02  -7.27e-04  -1.66e-02   3.03e-02  -1.82e-02  -3.56e-03
## 939    1.66e-02  -4.39e-02  -2.18e-03  -6.81e-03  -1.96e-03  -1.83e-02   1.62e-02
## 940   -8.58e-02  -5.50e-02   6.26e-04   3.24e-02   5.14e-02  -2.89e-02   1.00e-01
## 941   -2.03e-03   6.52e-02  -2.53e-05   2.05e-02  -5.15e-02   1.06e-01   2.12e-02
## 942   -1.26e-02   1.15e-02   6.20e-06  -7.68e-03  -1.47e-02   5.78e-03   2.25e-02
## 943   -3.19e-03  -1.53e-04   2.02e-04   3.06e-03  -8.88e-03  -1.26e-04   8.23e-03
## 944    2.16e-03  -1.50e-02   2.63e-05  -3.39e-03  -5.95e-03   6.12e-03  -8.14e-03
## 945   -9.01e-03   4.41e-03   9.95e-03   1.15e-02  -6.74e-03   4.06e-03  -6.02e-04
## 946   -3.92e-03   4.43e-04   1.92e-03  -2.67e-03  -2.24e-02  -4.68e-02  -1.92e-02
## 947    1.07e-02   3.69e-02   2.33e-04   1.90e-02  -4.61e-02   8.51e-02   4.11e-02
## 948   -5.72e-02   1.38e-01   3.23e-03   2.89e-02   3.78e-02  -3.51e-02  -4.68e-02
## 949    2.77e-02   1.63e-02  -4.10e-05  -9.22e-03   8.86e-03  -2.24e-02   1.29e-02
## 950   -1.20e-02  -1.47e-02   1.00e-04  -7.75e-03   7.58e-03  -1.78e-02   2.62e-02
## 951   -6.84e-03   8.29e-03   2.54e-02   2.86e-02   7.57e-03   1.13e-02  -1.04e-02
## 952   -6.99e-02  -1.80e-03   6.95e-02   7.58e-02   2.21e-02  -4.83e-03  -6.40e-03
## 953   -4.63e-03   1.19e-02   5.42e-02  -3.92e-03   3.81e-02  -3.87e-02   4.06e-02
## 954   -1.26e-02   7.07e-02  -5.45e-03   1.81e-02   2.77e-02  -4.96e-02  -1.09e-01
## 955   -4.66e-03   1.15e-04   6.74e-03   8.04e-03   2.10e-03   2.09e-03  -5.41e-04
## 956   -1.45e-03   8.25e-03   8.80e-04   2.67e-03  -5.20e-03  -3.74e-03   5.61e-03
## 957    6.09e-05   6.12e-05   1.18e-05  -2.44e-05   1.77e-04   8.07e-06  -1.56e-04
## 958   -3.44e-04  -1.15e-03   2.92e-03   3.40e-03   1.19e-03  -1.06e-03  -3.80e-04
## 959   -5.20e-03  -2.23e-03   1.38e-03   5.82e-03   1.63e-03  -7.06e-04   1.22e-02
## 960    5.35e-03  -4.51e-03  -8.24e-05  -2.62e-03   2.96e-03   4.62e-03  -1.23e-03
## 961    5.50e-03  -6.13e-03  -1.03e-02  -1.17e-03  -4.38e-03   7.45e-03  -1.87e-03
## 962    3.19e-03  -3.23e-03  -4.14e-02   4.44e-03   2.52e-02   2.59e-02  -3.86e-03
## 963    1.56e-03  -1.66e-05   4.25e-04  -8.27e-04  -1.27e-04   1.52e-03  -5.54e-04
## 964   -1.16e-03  -6.25e-04  -1.73e-04  -8.24e-04  -7.85e-04   1.23e-03   1.26e-03
## 965   -1.84e-03  -7.58e-04   2.27e-04  -9.83e-03   9.64e-03  -1.73e-02  -2.95e-03
## 966   -6.49e-03   1.13e-02   4.48e-04  -2.39e-03  -1.78e-04  -9.96e-03  -9.99e-03
## 967    7.07e-02   2.95e-02  -8.39e-03   1.29e-02  -4.00e-02  -2.46e-02   5.82e-03
## 968    6.63e-03  -5.62e-03  -8.35e-05  -2.68e-03   8.89e-03   8.02e-03   3.54e-03
## 969   -4.12e-03   1.01e-02  -1.67e-02   1.49e-03   6.03e-03   6.89e-03   1.85e-02
```

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## 970    -1.11e-02   2.05e-02   7.35e-04   5.07e-03   2.05e-03  -5.76e-03   1.03e-02
## 971     1.12e-03   1.14e-03   9.45e-05  -2.98e-04  -1.07e-03  -2.30e-04  -4.27e-04
## 972    -1.42e-04   2.55e-03  -1.24e-04  -2.41e-03  -1.02e-02  -1.38e-03  -8.79e-03
## 973     1.13e-04   6.95e-03   1.10e-02   1.26e-02  -3.46e-03   4.41e-03  -5.26e-03
## 974     2.60e-04  -1.48e-04   1.07e-05   3.96e-04  -6.97e-05  -1.01e-03   1.14e-03
## 975    -1.23e-02   2.34e-02  -3.62e-02  -4.39e-03  -3.57e-03   2.13e-02  -2.97e-02
## 976    -6.67e-02   8.62e-02  -9.48e-03   1.76e-02  -7.53e-02   2.01e-02  -9.57e-02
## 977     1.08e-02  -1.82e-03   1.14e-03  -3.80e-03  -1.48e-02  -1.80e-02  -1.00e-02
## 978    -4.55e-03  -3.81e-03   3.24e-02   3.71e-02  -5.50e-03  -2.70e-02   2.08e-02
## 979    -1.09e-02   5.88e-06   5.18e-04   3.64e-03   5.03e-03  -6.09e-03  -4.20e-03
## 980     3.19e-03   3.83e-03  -1.22e-04  -5.97e-03   1.63e-02  -2.98e-02   7.09e-03
## 981    -2.74e-02   1.08e-02   7.92e-02   2.14e-03  -4.21e-03  -4.32e-02   1.92e-02
## 982    -3.90e-02   1.30e-02   6.63e-02   5.36e-04  -2.03e-02   4.37e-02   5.71e-02
## 983     8.63e-04  -1.26e-03  -1.68e-03  -5.33e-05   4.06e-04   1.45e-04  -1.42e-03
## 984    -2.47e-03  -1.25e-03  -2.70e-04   1.35e-03  -3.28e-03  -2.84e-03   1.03e-03
## 985    -2.48e-02   9.35e-03  -1.53e-03  -9.75e-03   1.54e-04  -4.26e-02  -4.91e-03
## 986    -2.48e-02  -4.64e-02  -5.01e-03   1.99e-02  -6.38e-02   7.85e-02   6.96e-02
## 987     8.24e-03  -2.09e-02   1.47e-04  -1.19e-02  -4.62e-02  -3.81e-02   4.57e-02
## 988    -2.86e-03  -2.01e-02  -1.62e-02   1.45e-03   7.19e-03   9.80e-03   8.12e-03
## 989     2.36e-02  -7.91e-03  -3.27e-02  -2.71e-03  -2.04e-02  -3.56e-02  -2.63e-02
## 990     6.39e-03  -5.91e-03   1.79e-03  -5.24e-03  -2.64e-02   1.07e-02  -1.39e-03
## 991     2.01e-03   3.59e-04  -8.74e-03   7.65e-04  -4.73e-03   1.75e-03   3.88e-03
## 992    -2.86e-02   1.24e-03   2.66e-03  -8.76e-03   2.05e-02   2.70e-02  -1.55e-03
## 993    -5.25e-03   9.79e-05  -1.75e-02  -2.11e-02   1.13e-02   1.36e-02   2.92e-03
## 994    -4.52e-03   1.59e-02   9.26e-04  -3.42e-03  -1.52e-02  -1.22e-02   1.70e-02
## 995     7.94e-03  -3.82e-03  -1.99e-02   4.87e-03   2.44e-02  -3.74e-02  -1.97e-02
## 996    -4.97e-02  -7.08e-03   5.26e-03  -1.33e-02  -1.78e-02   2.08e-02   5.89e-02
## 997     3.30e-04   2.39e-02   2.07e-03  -9.15e-03   3.59e-02  -7.31e-04  -2.84e-02
## 998     2.34e-02  -4.37e-02  -7.23e-03   1.80e-02  -6.26e-02   4.52e-02   4.67e-02
## 999    -5.19e-02   1.65e-02   1.19e-03  -1.08e-02   3.43e-03   1.67e-02   4.15e-02
## 1000    1.56e-03   5.38e-04   5.99e-05   1.16e-03   3.93e-03   1.23e-03   1.14e-03
## 1001   -1.32e-02  -2.01e-02   2.97e-04  -2.54e-03   1.47e-02   1.31e-03  -3.28e-03
## 1002    1.21e-02  -8.19e-03  -8.13e-05  -7.46e-03  -3.06e-02  -5.41e-03   2.66e-02
## 1003   -2.70e-03   2.92e-03  -2.62e-02  -2.46e-04   2.75e-02  -2.26e-02  -6.09e-03
## 1004   -1.61e-02   1.64e-02   1.39e-03  -2.73e-03  -2.26e-03   1.10e-02   1.58e-02
## 1005   -3.56e-03   1.05e-02   1.33e-03  -2.09e-03   3.91e-03   1.91e-03  -3.63e-03
## 1006   -4.44e-02   1.28e-02  -1.65e-03  -1.13e-02   2.23e-02  -2.00e-02   1.50e-02
## 1007   -3.00e-02   2.95e-02   6.67e-02   3.22e-03   8.54e-02   1.02e-01  -6.89e-02
## 1008   -2.16e-02  -3.67e-02   5.97e-02   2.22e-03  -4.95e-02   2.00e-02   6.95e-03
## 1009    2.50e-04  -2.08e-04  -1.72e-06  -1.39e-04  -1.67e-04   2.66e-04  -3.94e-04
## 1010   -1.22e-03   2.69e-04  -5.50e-05   1.12e-04   2.90e-04  -9.32e-04   9.38e-04
## 1011   -3.49e-02  -3.27e-03  -1.78e-03   5.66e-03   1.02e-02  -2.11e-02  -1.60e-02
## 1012   -9.68e-03   2.05e-02   6.01e-03  -5.16e-03  -2.97e-02   2.33e-02   5.43e-02
## 1013    7.09e-02   2.40e-02   6.10e-02   5.50e-03  -9.90e-04  -3.85e-02  -3.04e-02
## 1014   -1.36e-04   4.04e-03  -4.21e-04  -2.45e-03  -3.38e-04   1.38e-03  -5.73e-03
## 1015   -7.65e-03   8.82e-03   5.47e-04  -5.99e-03   2.77e-02  -9.05e-04   3.04e-02
## 1016   -1.21e-03   4.82e-03  -1.49e-02   4.01e-04   7.68e-03   1.05e-02  -1.38e-02
## 1017    6.92e-02   2.55e-02  -3.70e-04   2.37e-02  -5.31e-02   2.73e-04  -8.11e-02
## 1018    4.83e-03   1.31e-02   6.32e-04  -5.24e-03  -2.33e-02  -3.58e-03   8.58e-03
## 1019   -2.58e-02  -6.85e-03  -4.41e-04  -9.74e-03   2.44e-02   1.08e-02   2.75e-02
```

```
## 1020 -2.07e-02  7.03e-03 -2.31e-04 -6.07e-03  2.33e-02 -1.42e-02 -8.01e-03
## 1021 -4.52e-03 -2.29e-03  7.28e-04 -9.03e-04  4.96e-03  4.69e-03  6.99e-03
## 1022  1.20e-01 -6.04e-02 -2.83e-03  1.52e-02 -4.92e-02  4.28e-03 -7.71e-02
## 1023 -4.19e-03 -2.03e-03  9.84e-03  1.16e-02 -5.15e-03  2.06e-03 -1.30e-03
## 1024  2.15e-02 -3.15e-02 -1.01e-03 -4.12e-03 -1.09e-02  9.38e-03  1.42e-02
## 1025 -8.83e-03  2.50e-04 -3.03e-04  2.58e-03 -1.33e-02 -8.84e-03 -1.56e-02
## 1026 -2.26e-03  1.92e-02  1.47e-03 -5.30e-03 -2.47e-02  1.08e-02 -1.42e-02
## 1027  5.16e-05 -6.09e-04 -1.06e-05  5.19e-04 -1.40e-03 -2.83e-04  2.71e-03
## 1028 -6.44e-03  4.96e-04 -3.24e-04 -3.29e-03  1.10e-02  1.00e-02 -1.29e-02
## 1029  9.76e-03 -1.55e-02  3.10e-03 -3.51e-03 -1.85e-02  1.07e-02  1.27e-02
## 1030 -1.96e-03  7.21e-03 -3.56e-02 -4.07e-02 -6.36e-03 -1.58e-03  2.72e-03
## 1031 -1.22e-03  3.86e-03 -5.00e-04 -3.15e-03  5.17e-03  4.69e-04  7.27e-03
## 1032  3.49e-02 -8.78e-02 -7.90e-03  3.18e-02 -1.05e-01  3.64e-03 -1.42e-01
## 1033  5.26e-02  7.25e-03 -1.08e-01 -1.24e-01 -1.54e-02 -3.82e-02 -7.12e-02
## 1034 -6.51e-02 -3.51e-02  9.52e-02 -2.51e-03  1.21e-01 -8.12e-02  1.80e-02
## 1035 -5.79e-03  1.06e-02 -2.45e-03 -1.20e-02 -1.21e-02 -3.15e-02  1.82e-02
## 1036  9.61e-03  4.66e-03  4.14e-04 -2.45e-03 -1.07e-02  1.02e-03 -9.39e-03
## 1037  5.34e-02 -3.32e-02  5.44e-02 -1.11e-02 -4.36e-02 -4.67e-02 -2.58e-02
## 1038  4.18e-02 -2.21e-02 -6.93e-04 -8.99e-03 -2.95e-02 -4.31e-02  1.44e-02
## 1039  1.77e-03 -3.22e-03 -2.19e-04 -1.58e-03 -3.52e-03  8.84e-04 -7.98e-04
## 1040  9.33e-03  4.38e-02  1.66e-03  2.97e-02  5.27e-02  2.38e-03 -1.05e-01
## 1041  1.26e-02  4.66e-04 -1.52e-02 -1.83e-02 -9.91e-03  3.38e-04  7.40e-03
## 1042  2.14e-03  6.91e-03 -6.20e-04 -5.18e-03 -3.12e-03  5.35e-03 -1.78e-02
## 1043 -5.02e-03 -1.58e-02  2.29e-02  2.68e-02 -5.29e-03  4.12e-03 -2.73e-03
## 1044  3.94e-03 -2.75e-03 -7.20e-04  4.53e-04 -3.92e-03 -2.71e-03  4.35e-03
## 1045 -8.78e-05 -1.32e-03  3.91e-04 -1.10e-03 -7.24e-03  2.73e-03  6.92e-03
## 1046 -8.64e-04  6.31e-04  5.32e-05  4.63e-04  2.03e-04 -6.63e-04  1.79e-04
## 1047  2.88e-04 -3.26e-02 -1.27e-03 -7.93e-03 -3.06e-02 -2.62e-02 -1.92e-02
## 1048 -2.24e-03 -1.71e-03 -1.84e-02  6.03e-04  1.19e-02  4.41e-03 -1.60e-02
## 1049 -2.99e-03  5.46e-03 -1.63e-03 -7.12e-03 -1.88e-02  9.89e-03 -1.44e-02
## 1050  5.06e-03  2.50e-03 -5.26e-04 -2.96e-03 -8.29e-03 -4.93e-03 -8.55e-03
## 1051  5.24e-04 -2.01e-02 -2.40e-02 -6.59e-05  1.80e-04 -1.53e-03  2.82e-02
## 1052 -1.24e-02 -1.24e-02 -2.27e-02  2.64e-03  2.00e-02  2.03e-02  2.60e-02
## 1053 -6.11e-03  9.90e-05  1.08e-02  1.24e-02 -1.50e-03  1.44e-03 -1.12e-03
## 1054 -3.06e-02  3.39e-02  7.28e-04  5.19e-03 -1.44e-02 -1.55e-02 -6.10e-03
## 1055  3.33e-03 -6.59e-03  1.54e-04  4.69e-03  1.84e-02 -2.06e-03  1.96e-03
## 1056 -1.21e-02  8.42e-03 -2.17e-02 -1.16e-03 -1.03e-03 -1.18e-02  7.66e-03
## 1057 -3.83e-02 -4.19e-02  8.61e-02 -5.09e-03  1.14e-01 -6.55e-02 -9.74e-02
## 1058  1.14e-01 -2.32e-02  5.20e-02 -4.15e-03 -6.67e-02  1.86e-02 -6.08e-02
## 1059 -1.16e-02 -2.37e-02 -4.31e-04  2.41e-02  1.21e-02  6.32e-02 -6.71e-02
## 1060  3.00e-03 -4.12e-03 -8.58e-05 -2.01e-03  2.00e-03  1.04e-03 -6.51e-03
## 1061  4.78e-02 -2.79e-02  2.79e-02 -6.01e-03 -2.37e-02 -9.03e-04 -1.60e-02
## 1062 -8.21e-03  7.06e-03  1.88e-02  2.22e-02  1.57e-05 -3.09e-03 -9.24e-03
## 1063  1.48e-02 -8.81e-03 -4.26e-02  3.96e-03 -3.08e-02  3.35e-02  2.31e-02
## 1064 -1.05e-03  3.71e-03 -8.56e-04 -2.87e-03 -5.20e-03 -7.05e-03 -1.58e-03
## 1065  3.25e-04  1.94e-04 -3.60e-05 -2.49e-04  5.08e-04  4.05e-04 -1.03e-04
## 1066  1.99e-02 -3.76e-02 -6.49e-04 -5.33e-03 -1.20e-02  7.17e-03 -9.16e-03
## 1067 -2.35e-02  2.89e-03  5.98e-04 -5.16e-03 -1.30e-02  9.51e-03  2.68e-02
## 1068  1.69e-02 -2.41e-02  1.09e-03 -6.73e-03  1.42e-02 -7.58e-03 -3.76e-03
## 1069  1.29e-01 -4.18e-02  5.23e-02 -5.07e-03 -4.66e-02 -3.16e-02  1.10e-02
```

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## 1070 -3.47e-02  4.16e-03 -3.11e-03 -1.29e-02 -3.13e-02  2.21e-02  3.27e-02
## 1071 -2.22e-02  1.18e-02 -3.79e-02  1.83e-04  1.73e-02  7.11e-03 -7.65e-03
## 1072  6.99e-03 -1.81e-02 -1.53e-03 -5.44e-03  1.31e-02  9.08e-03 -2.82e-03
## 1073 -2.55e-04  5.50e-03 -1.65e-02  2.10e-03  1.32e-02  1.09e-02 -1.71e-02
## 1074 -1.88e-02  1.43e-02 -3.32e-03 -1.04e-02 -1.43e-02 -4.75e-02 -8.58e-03
## 1075  2.10e-03  3.58e-02  4.76e-03 -6.76e-03  2.11e-02  4.08e-03 -3.02e-02
## 1076  1.18e-02  3.61e-03 -4.78e-04 -3.33e-03  4.81e-03 -1.12e-03 -2.49e-03
## 1077 -3.10e-02  1.48e-02  2.26e-02  1.69e-03  6.50e-03  3.65e-03 -6.85e-03
## 1078  1.45e-01 -4.92e-02 -4.07e-03  1.49e-02 -7.16e-02 -5.62e-02 -7.20e-02
## 1079  1.31e-03  1.23e-04 -1.18e-04 -2.09e-03  5.33e-03 -1.07e-02 -5.16e-03
## 1080  2.32e-03 -1.02e-02 -1.15e-03 -9.19e-03 -1.61e-02  6.31e-03  1.29e-02
## 1081  1.09e-03 -6.17e-05 -2.86e-04  7.71e-04 -6.34e-03 -2.46e-03  5.96e-04
## 1082 -2.80e-03  8.19e-04 -3.09e-03 -1.07e-02 -1.08e-02 -1.31e-02 -2.42e-02
## 1083 -2.80e-03  3.50e-02  9.18e-04 -1.28e-02  1.57e-02 -2.91e-02  3.87e-02
## 1084  7.86e-02 -1.51e-02 -5.83e-03  1.40e-02 -2.47e-02 -3.58e-03  7.47e-02
## 1085  6.48e-03  4.83e-03 -1.50e-04 -8.71e-03 -7.37e-03  2.10e-02 -1.55e-02
## 1086  1.05e-01 -8.76e-03  7.17e-02 -5.80e-06 -2.43e-02 -3.19e-02  6.82e-02
## 1087  9.26e-03 -3.05e-03 -5.85e-02 -4.31e-03  2.87e-02 -7.36e-02 -1.26e-02
## 1088  1.89e-02  9.19e-03  8.29e-04 -7.52e-03 -2.52e-02  7.97e-03  1.38e-02
## 1089 -1.66e-03 -1.93e-02 -9.75e-04 -4.54e-03 -1.28e-02  8.08e-03 -3.25e-03
## 1090  9.45e-04 -6.83e-04 -6.38e-05 -1.35e-03  8.78e-04 -9.12e-04  4.13e-03
## 1091 -3.59e-02  8.23e-03 -1.39e-03 -5.63e-03  1.25e-02 -1.37e-03 -4.13e-03
## 1092 -1.19e-02 -9.49e-03 -2.39e-03 -1.33e-02  7.28e-03 -4.69e-02 -2.56e-02
## 1093 -5.44e-03  3.07e-03  2.29e-04  1.05e-03  4.67e-04  4.81e-03  2.87e-03
## 1094 -2.28e-02  1.96e-02 -2.84e-02  2.51e-03  3.18e-02  2.49e-02 -2.72e-02
## 1095 -2.01e-03 -1.52e-02  1.46e-04 -8.27e-03 -3.00e-02 -6.69e-04  3.36e-02
## 1096 -2.04e-03  2.03e-02  3.10e-03 -7.19e-03  1.49e-02 -4.82e-02  1.80e-02
## 1097  1.76e-02  4.16e-03  1.12e-03 -8.40e-03 -8.31e-03  5.57e-03 -2.83e-03
## 1098 -3.37e-02  2.12e-02 -3.33e-03 -1.44e-02  2.66e-02 -3.83e-02 -6.47e-03
## 1099  4.34e-03 -2.15e-03  1.12e-02  1.26e-02 -2.95e-03  1.59e-03 -4.55e-03
## 1100  9.68e-04 -6.47e-03 -5.70e-04 -2.75e-03  2.39e-03  4.64e-03  7.30e-03
## 1101  2.85e-02 -5.23e-03 -3.23e-03 -1.19e-02 -2.92e-02 -4.31e-02  9.57e-03
## 1102 -6.01e-03  7.58e-03  8.88e-05 -3.15e-03 -1.28e-03  3.92e-03 -1.03e-02
## 1103  1.82e-02 -6.94e-03  1.80e-03 -1.06e-02 -2.18e-02  2.48e-02 -5.12e-03
## 1104 -1.56e-03  1.02e-03  1.17e-04  8.00e-04 -1.34e-03  1.26e-03  4.55e-04
## 1105  2.97e-03  5.77e-03  5.07e-04 -1.84e-03  4.89e-03  7.89e-04 -3.21e-03
## 1106 -4.94e-02  8.01e-03  2.41e-04 -7.19e-03 -2.31e-02  3.91e-03  3.46e-02
## 1107  1.23e-01 -3.64e-02  3.74e-04  2.09e-02 -4.76e-03 -5.32e-02 -4.30e-02
## 1108  1.23e-03 -2.60e-03 -1.37e-02  9.71e-04 -2.03e-03 -1.37e-03 -3.33e-03
## 1109  2.49e-03 -1.88e-02 -2.36e-03 -1.14e-02 -1.58e-02  1.99e-02 -2.59e-02
## 1110 -4.42e-03  8.67e-03 -6.22e-04 -5.09e-03 -1.42e-02 -2.80e-02 -2.51e-03
## 1111  4.02e-02  3.77e-02 -2.47e-03  1.79e-02 -7.46e-02 -3.97e-02 -7.84e-02
## 1112 -5.93e-02  4.14e-03 -1.10e-02  2.85e-02 -2.90e-02 -8.31e-02  4.20e-02
## 1113 -1.97e-02  4.62e-02 -5.93e-04  2.77e-02  2.29e-02 -6.94e-02  2.09e-02
## 1114 -9.49e-04  4.07e-04  1.47e-03  1.75e-03 -4.83e-04  6.99e-04 -6.59e-04
## 1115 -2.84e-03 -2.87e-02 -2.99e-04 -6.78e-03 -1.46e-02 -1.22e-02 -4.31e-03
## 1116 -5.08e-02 -2.33e-02  4.96e-04 -1.17e-02  1.95e-02  4.03e-03  4.14e-02
## 1117 -1.58e-02  4.02e-03  5.85e-04  4.70e-03  1.51e-04  2.04e-02  5.37e-03
## 1118 -1.38e-03  2.22e-03 -2.26e-05 -1.98e-03 -5.75e-03  5.04e-03  3.08e-03
## 1119  7.29e-03  7.94e-03  4.15e-05 -5.15e-03  1.09e-02  1.06e-02  1.67e-02
```

```
## 1120   3.66e-04 -2.82e-03 -2.07e-04 -1.78e-03 -5.49e-03 -4.05e-03 -1.43e-03
## 1121   1.11e-02 -1.07e-02  5.29e-04 -8.17e-03  1.32e-02 -1.60e-02  1.27e-02
## 1122  -9.52e-03  1.23e-02  1.85e-03 -3.79e-03 -3.16e-03  1.31e-02  9.03e-03
## 1123  -9.23e-03  2.33e-02  4.12e-03 -7.79e-03 -4.57e-02  2.36e-02  2.49e-02
## 1124  -1.18e-02  1.78e-03  4.37e-03 -1.21e-02  6.24e-03 -3.56e-03  5.74e-02
## 1125  -7.70e-03  2.39e-03  4.33e-05  3.86e-03  1.41e-02 -3.40e-03  8.92e-03
## 1126   7.80e-03  2.42e-03 -9.72e-03 -8.33e-04 -2.69e-03  5.10e-03  9.53e-03
## 1127   3.24e-03  6.58e-03  1.68e-03 -1.40e-03  1.74e-02  4.46e-04 -2.54e-03
## 1128   5.29e-04  3.18e-03  1.40e-04 -7.64e-04 -6.61e-04 -2.69e-04 -2.61e-03
## 1129   4.66e-03  2.25e-03 -3.75e-02  8.23e-03 -3.85e-02  1.68e-02  5.33e-02
## 1130   7.41e-04  6.06e-04 -5.63e-05 -2.28e-04 -2.91e-04 -1.74e-05 -7.55e-04
## 1131   2.36e-03  8.37e-04 -1.01e-04 -2.99e-03  1.28e-03 -1.22e-02  3.69e-03
## 1132   9.99e-04  1.08e-03 -2.59e-02 -1.93e-03  4.88e-03  1.08e-04 -2.45e-02
## 1133   5.75e-03 -8.99e-03 -4.67e-04 -3.19e-03  1.34e-02 -4.04e-03 -9.74e-03
## 1134  -2.85e-04  3.00e-04  1.76e-05  9.50e-05  7.49e-05  5.39e-04  2.76e-04
## 1135   2.11e-03 -8.39e-03 -1.37e-03 -5.25e-03 -1.29e-02  2.32e-03 -3.34e-03
## 1136  -1.06e-03 -8.12e-05  2.06e-04 -3.00e-04  4.68e-04  1.28e-03 -2.41e-03
## 1137   5.82e-03 -1.22e-02 -3.02e-03  1.63e-02 -5.45e-02  8.20e-02  8.15e-03
## 1138  -8.32e-02  5.54e-02  9.47e-02  1.09e-01  3.43e-02 -6.87e-02  2.19e-02
## 1139   2.18e-02  5.16e-03 -3.01e-02 -1.03e-03 -3.50e-02 -2.80e-02  1.96e-02
## 1140   7.11e-05  1.62e-04  5.05e-05 -1.82e-04  3.13e-04  2.52e-04  3.50e-04
## 1141   2.77e-04 -4.61e-04 -1.06e-04 -1.41e-03 -3.66e-03  5.63e-04  2.24e-03
## 1142  -5.36e-02  9.78e-03  7.79e-04 -8.06e-03  3.15e-02  6.01e-03  1.47e-02
## 1143  -3.07e-02 -6.86e-02 -1.78e-03 -1.81e-02 -3.11e-02  1.72e-02  2.01e-03
## 1144  -2.76e-02 -2.71e-02  4.42e-02  5.12e-02  1.84e-02 -3.47e-02  2.96e-02
## 1145  -1.65e-02  1.38e-02 -2.74e-02  1.92e-03  1.16e-03  1.73e-02 -2.49e-02
## 1146   7.87e-03 -2.38e-03  2.57e-03 -6.95e-03  1.47e-02 -5.37e-03 -3.02e-03
## 1147   2.65e-03  1.21e-03 -8.34e-03 -8.73e-04  6.25e-03 -5.22e-04 -1.05e-03
## 1148   2.25e-03 -2.45e-02 -5.03e-04 -4.19e-03  2.78e-03 -2.38e-02 -4.36e-03
## 1149   1.39e-03 -5.00e-03 -3.91e-04 -4.39e-03 -1.52e-02 -4.93e-04  7.24e-03
## 1150  -8.26e-03  5.60e-03 -1.31e-03 -4.55e-03 -1.03e-02 -1.20e-02 -9.74e-03
## 1151   1.75e-03 -1.47e-03 -2.78e-04  6.80e-04 -2.06e-04  2.76e-03 -1.97e-03
## 1152  -5.16e-02  2.02e-02 -8.93e-03 -2.44e-02  1.56e-02 -6.81e-02  2.07e-02
## 1153   5.14e-03  2.15e-02  4.25e-04 -6.37e-03  9.76e-03  7.28e-03 -6.29e-03
## 1154   1.24e-02 -5.73e-02  4.48e-02 -3.52e-03 -1.94e-02 -2.88e-02 -3.01e-02
## 1155  -4.25e-03 -3.84e-03 -9.00e-05  9.80e-04  3.39e-03  1.01e-02  6.22e-03
## 1156  -7.19e-04  1.26e-03  4.02e-04  1.86e-03 -4.77e-03 -2.63e-03  6.99e-04
## 1157  -2.25e-03 -3.63e-04 -7.44e-04 -5.48e-03 -2.75e-03 -6.43e-03  1.59e-02
## 1158   1.44e-02 -6.71e-03 -2.56e-02 -2.94e-02 -1.57e-02 -3.15e-03  2.30e-03
## 1159   2.95e-03 -3.75e-04 -2.62e-04 -2.62e-03  3.23e-03 -7.42e-03 -2.87e-03
## 1160  -2.51e-02 -1.80e-02 -3.53e-02 -5.73e-04  1.13e-03  1.92e-02  3.72e-02
## 1161  -2.02e-02  1.98e-02  3.38e-03  9.41e-03  1.57e-02 -1.02e-02  1.37e-02
## 1162   1.53e-02 -1.95e-03 -6.03e-05 -5.87e-03  1.36e-02  1.38e-02 -1.32e-02
## 1163   4.06e-02 -4.52e-02  5.26e-03  2.84e-02 -1.70e-02  4.96e-03  7.53e-02
## 1164  -2.16e-02 -7.95e-03  2.94e-06 -6.40e-03 -2.81e-02 -2.63e-03  9.86e-03
## 1165   7.04e-03  1.99e-02  3.99e-03 -9.58e-03  2.56e-02 -1.81e-02 -6.05e-03
## 1166  -1.45e-02 -1.75e-02 -2.75e-02  4.71e-03  1.33e-02  2.49e-02  4.23e-02
## 1167   3.13e-03  5.61e-04 -3.06e-03  6.84e-05  2.80e-03  1.60e-03 -1.13e-03
## 1168   5.56e-02  6.27e-03  5.17e-03  2.90e-02 -4.33e-03  2.88e-02 -7.58e-02
## 1169  -6.78e-02  4.62e-02 -4.90e-02  5.49e-03  1.94e-02  3.31e-02  7.35e-02
```

```
## 1170  2.18e-03  5.19e-03  5.37e-04 -1.42e-03  5.14e-03  8.51e-04  2.57e-03
## 1171 -8.63e-03  1.63e-02 -2.38e-02  1.43e-03  1.02e-02  1.57e-02 -2.48e-02
## 1172  5.52e-02  2.10e-02 -5.25e-03  9.57e-03  5.01e-02 -1.25e-02 -6.14e-02
## 1173 -2.85e-02  1.18e-02  2.34e-05 -9.41e-03  1.20e-02 -5.06e-03 -4.43e-03
## 1174 -8.69e-03 -7.28e-05  8.25e-05 -3.68e-03  1.66e-03  5.76e-03  7.62e-03
## 1175 -7.83e-03 -8.78e-03  1.01e-02  5.24e-04 -2.16e-03 -6.84e-03  9.03e-03
## 1176  5.53e-03 -3.00e-03 -3.89e-04 -2.03e-03  3.89e-03 -1.19e-03 -5.60e-03
## 1177 -2.76e-03  4.37e-03  6.43e-04 -1.61e-03  1.17e-02 -1.38e-02  1.19e-02
## 1178 -4.49e-04  1.03e-02  1.57e-03  3.70e-03  5.62e-05  8.08e-03  7.71e-03
## 1179 -9.84e-03  2.30e-02 -1.38e-04 -8.57e-03 -1.63e-02  1.34e-02 -3.76e-03
## 1180 -7.36e-04 -7.43e-04  3.34e-04  1.87e-03  2.58e-03 -2.29e-03  3.41e-03
## 1181 -3.38e-02  1.70e-02  4.36e-03 -5.53e-03  2.63e-02  5.36e-03  3.55e-02
## 1182  2.16e-04  1.34e-03  2.21e-04 -9.36e-04  2.92e-03  1.54e-03 -4.51e-04
## 1183  1.09e-03  6.57e-04 -2.54e-03 -2.96e-03  2.56e-04 -1.12e-03  1.13e-03
## 1184 -8.98e-03 -4.10e-03  4.61e-04  3.05e-03  2.78e-03 -5.66e-03  9.29e-03
## 1185 -1.03e-02 -6.10e-03 -1.67e-04  1.78e-03 -6.35e-03  1.11e-02 -2.67e-03
## 1186 -8.93e-03  5.75e-03  1.51e-03  3.26e-03  6.42e-03  4.24e-03  1.99e-03
## 1187 -1.11e-01 -1.75e-02  7.62e-02  8.09e-03  1.55e-02  1.34e-02  5.62e-02
## 1188 -2.20e-02 -1.01e-02  1.71e-02 -1.07e-03  1.03e-02 -1.47e-02  1.62e-02
## 1189 -5.53e-02  2.77e-02  1.64e-04 -1.80e-02 -2.14e-02  1.93e-02  5.45e-02
## 1190 -7.87e-03 -1.00e-05  7.02e-04  3.94e-03 -7.92e-03 -6.20e-03  9.09e-03
## 1191  9.42e-04 -6.16e-04  1.07e-04  6.46e-04  4.50e-04 -1.04e-03  1.40e-03
## 1192 -3.24e-03  6.39e-03  8.66e-04 -3.04e-03 -7.61e-03  4.33e-03  1.31e-02
## 1193 -1.71e-03 -1.48e-02  1.38e-03 -8.50e-03  2.55e-02 -1.94e-02 -2.66e-02
## 1194  2.12e-03 -3.21e-02 -3.85e-02 -3.87e-03  3.71e-02  2.15e-02 -3.13e-02
## 1195  1.96e-03 -9.80e-03 -6.04e-04  2.12e-03  6.83e-03 -6.46e-03 -5.86e-03
## 1196 -1.26e-05 -1.75e-05  1.90e-06 -1.15e-05  1.94e-06  3.55e-05 -6.38e-06
## 1197  2.72e-02  2.49e-02  3.14e-03 -8.23e-03 -2.36e-02 -3.70e-02 -2.59e-02
## 1198 -3.24e-02  2.86e-02  1.20e-03 -7.65e-03  1.00e-03 -3.33e-03 -2.55e-02
## 1199  4.16e-03  2.35e-03  2.60e-02  2.90e-02  9.52e-03 -6.88e-03 -1.26e-03
## 1200 -2.34e-03  2.94e-03 -2.17e-04 -5.94e-03 -1.88e-02 -2.92e-02  2.14e-02
## 1201  1.10e-02 -1.69e-02 -6.86e-05 -6.96e-03  1.13e-02  1.32e-02 -9.67e-04
## 1202  2.74e-02 -5.40e-02 -4.38e-03  1.51e-02  6.28e-02 -7.96e-04  4.91e-02
## 1203  2.01e-03 -6.48e-04 -9.39e-05 -7.92e-04 -3.38e-03  1.43e-03 -2.94e-03
## 1204 -1.17e-02  1.18e-02  3.87e-04  2.73e-03  7.55e-03  9.16e-03 -3.85e-03
## 1205 -4.03e-02  2.78e-02  7.00e-02 -1.34e-02 -2.15e-02 -2.06e-02  6.73e-02
## 1206 -3.14e-02  3.28e-02  3.17e-04  2.64e-02  8.25e-02 -5.25e-02  7.59e-02
## 1207 -1.16e-04  8.80e-04  2.08e-03  2.35e-03  9.09e-05  2.81e-04 -1.04e-03
## 1208  1.13e-02 -5.18e-02 -3.40e-03 -1.00e-02 -2.73e-02 -2.80e-02  2.56e-02
## 1209 -2.16e-03 -3.23e-03  1.24e-04  3.05e-03  5.51e-03 -3.26e-03 -3.98e-03
## 1210 -7.09e-03  8.32e-03  8.80e-04  2.39e-03 -4.34e-03 -3.56e-03  1.22e-03
## 1211 -9.31e-04 -1.34e-03 -1.52e-04  5.71e-04 -2.54e-03  2.32e-03 -8.43e-04
## 1212 -1.83e-02 -1.45e-02 -2.32e-02 -3.56e-03 -1.74e-02  1.02e-02 -3.54e-03
## 1213 -1.49e-02  1.42e-03 -2.85e-04 -7.21e-03  3.52e-03 -1.78e-02  1.01e-02
## 1214 -7.16e-02 -8.16e-02  1.42e-04  3.13e-02 -7.05e-02 -2.49e-02  1.80e-02
## 1215  6.41e-03 -2.58e-03  4.92e-05 -9.46e-04 -3.35e-04  2.51e-03 -3.47e-04
## 1216 -1.11e-02 -2.65e-02 -5.09e-02  3.29e-03  5.97e-02  3.05e-02  6.74e-02
## 1217  1.04e-02 -7.04e-03  6.96e-06 -2.55e-03 -5.03e-03  5.34e-03 -6.21e-03
## 1218  5.32e-05  1.88e-03  1.37e-04 -4.03e-04  1.04e-03 -1.11e-04 -6.18e-04
## 1219  1.59e-03 -5.74e-03 -3.94e-04 -2.89e-03 -2.48e-03  1.37e-03 -5.01e-03
```

```
## 1220 -2.40e-04  3.62e-03  1.02e-04 -1.21e-03 -2.00e-03 -1.69e-04 -4.04e-03
## 1221 -5.13e-03  6.36e-03  7.17e-04 -3.75e-03  5.23e-03  7.91e-03 -2.15e-03
## 1222 -2.49e-04  1.80e-04  1.09e-03  1.27e-03 -4.07e-04  5.55e-04 -1.09e-04
## 1223  8.20e-02 -4.40e-02  4.45e-03  2.91e-02 -7.30e-02  9.37e-02  6.92e-02
## 1224  6.11e-02  6.61e-03  8.35e-02  8.88e-03  5.96e-02 -7.93e-03  2.28e-02
## 1225 -5.69e-03  9.58e-03 -1.61e-03 -8.31e-03  1.43e-02 -1.65e-02 -1.90e-02
## 1226 -5.42e-03 -1.42e-02 -1.74e-03 -1.01e-02 -1.81e-02 -5.15e-02 -2.25e-02
## 1227 -3.71e-02  1.62e-02 -2.87e-02  3.41e-03  1.36e-02 -2.71e-03  3.26e-02
## 1228  8.72e-04  1.32e-03  3.26e-04 -1.60e-03  6.01e-04  3.85e-03  3.04e-03
## 1229 -1.27e-02 -5.29e-03  2.16e-02  2.58e-02  5.52e-03  6.38e-03 -2.66e-03
## 1230 -1.10e-02  2.86e-02  6.69e-03 -2.77e-03  3.58e-02  8.20e-03  1.94e-02
## 1231 -4.48e-03  2.59e-02 -8.44e-04 -1.01e-02  1.40e-02 -5.48e-02  1.18e-02
## 1232 -1.59e-03 -3.02e-03  2.04e-04 -1.82e-03  4.51e-04 -2.68e-03 -9.33e-04
## 1233 -1.81e-03 -4.83e-03  6.43e-05  1.71e-03  5.65e-03  1.03e-02  5.67e-03
## 1234 -1.17e-02  7.12e-03  7.69e-04 -3.48e-03 -6.42e-04 -8.54e-03  4.70e-03
## 1235 -6.58e-03 -9.92e-03  1.20e-02  1.46e-02  3.69e-03  5.04e-03 -1.62e-03
## 1236  4.09e-03 -7.17e-03 -1.95e-04 -2.64e-03 -5.93e-03  5.20e-03 -4.95e-04
## 1237  2.66e-02 -5.05e-02 -8.59e-04  1.98e-02  7.57e-02  2.02e-02 -3.89e-02
## 1238  1.12e-01 -2.61e-02  1.90e-03  2.24e-02  3.07e-02 -4.09e-02 -7.93e-02
## 1239 -6.92e-02  2.81e-02  1.89e-03 -8.79e-03  4.24e-02  1.50e-02 -9.32e-03
## 1240 -2.28e-03  1.08e-02 -2.73e-02 -2.26e-03  3.08e-02 -3.50e-02 -2.52e-02
## 1241  1.37e-04 -2.50e-04  1.17e-03  1.35e-03  8.65e-05  5.19e-04 -4.74e-04
## 1242 -2.66e-02  1.19e-02 -2.17e-03 -7.57e-03  1.92e-02 -1.85e-02 -2.21e-02
## 1243 -5.02e-03  3.32e-03 -3.84e-04 -7.55e-03  3.66e-03  3.68e-03  9.65e-03
## 1244  6.39e-03 -9.85e-03 -1.28e-03 -3.90e-03  8.76e-03  3.94e-03 -2.05e-03
## 1245 -1.32e-02  8.72e-03 -2.78e-02  1.24e-03 -2.75e-02  1.41e-02 -2.51e-02
## 1246 -1.30e-02  2.27e-02 -2.81e-02  4.52e-04 -4.40e-03 -1.78e-03  3.22e-02
## 1247  7.66e-02 -2.85e-02  9.05e-02  8.64e-03 -3.59e-02 -5.72e-03  2.08e-02
## 1248 -8.65e-04  1.79e-03 -2.63e-04 -3.61e-03 -4.52e-03  3.96e-03  1.38e-02
## 1249 -1.38e-02  1.01e-02  8.99e-04 -5.65e-03 -1.02e-02 -2.40e-04 -4.91e-03
## 1250  8.86e-02  8.64e-03  3.66e-03  2.44e-02 -2.79e-02  6.11e-03 -3.17e-02
## 1251  1.35e-02  2.83e-02 -2.74e-02  6.20e-03  2.07e-02  2.37e-02 -2.63e-02
## 1252 -2.57e-03  6.98e-03 -1.01e-03 -3.86e-03 -2.75e-03 -3.87e-03 -1.52e-03
## 1253  1.54e-02  1.57e-03  2.68e-03 -2.24e-03  2.05e-02  1.13e-02 -1.49e-02
## 1254 -8.34e-04  3.79e-04  1.51e-03  1.76e-03 -7.00e-04  5.76e-04 -6.92e-04
## 1255 -3.49e-03  3.43e-03  9.82e-05  7.84e-04  2.18e-03  5.15e-04  1.63e-03
## 1256  2.60e-02 -2.86e-02 -3.31e-03  1.12e-02 -4.83e-02  2.10e-02 -5.40e-02
## 1257 -1.85e-02 -7.52e-03 -2.56e-02  1.32e-03  8.83e-03  1.70e-02 -8.14e-03
## 1258  1.35e-02 -7.12e-02 -1.45e-03  2.62e-02  4.50e-02  5.05e-02 -1.04e-01
## 1259 -6.71e-03  5.18e-04 -2.16e-03 -8.34e-03  7.61e-03  8.78e-03 -1.84e-02
## 1260  5.62e-04  1.05e-03  8.34e-05 -3.71e-04  1.25e-03 -8.18e-04 -4.43e-04
## 1261 -1.28e-02  4.96e-03  1.82e-02  2.12e-02 -2.54e-03  3.63e-03  4.63e-03
## 1262 -2.23e-02  2.39e-02  1.65e-03 -1.39e-02 -1.92e-03 -3.46e-02  2.54e-02
## 1263 -2.23e-03  6.07e-02  5.85e-02 -3.58e-04  3.08e-03  4.29e-02  5.57e-03
## 1264  3.60e-03 -1.03e-02 -1.44e-03 -4.96e-03 -3.96e-04 -2.75e-03  4.71e-03
## 1265 -2.93e-03  1.71e-03  2.20e-04 -2.41e-04  2.21e-03  1.91e-03 -7.03e-04
## 1266  7.39e-03 -6.84e-03 -2.42e-02 -2.80e-02 -3.10e-03 -9.14e-03  1.19e-02
## 1267  7.28e-03 -7.88e-03 -9.56e-04 -3.28e-03  3.79e-03  2.62e-04 -2.03e-03
## 1268 -2.18e-04 -2.87e-03 -9.04e-03 -1.03e-02  3.92e-03 -5.41e-04  3.39e-03
## 1269 -2.06e-02  2.58e-03  3.88e-02  4.57e-02  8.84e-03  1.96e-02  2.41e-02
```

```
## 1270  1.82e-03 -5.29e-03  2.15e-04 -1.44e-03  5.32e-03  3.11e-03  2.21e-03
## 1271 -2.19e-02 -6.21e-03 -1.80e-03 -1.02e-02  9.03e-03  9.87e-03 -1.87e-02
## 1272  9.56e-02 -5.35e-02 -3.77e-03  1.97e-02 -4.80e-02 -5.39e-03 -3.56e-02
## 1273 -1.51e-03 -3.21e-03 -2.07e-04 -1.27e-03 -2.70e-03  5.02e-04 -3.28e-03
## 1274  2.44e-03 -5.69e-02 -4.18e-03  1.37e-02  5.71e-02 -1.05e-02  8.63e-03
## 1275 -5.53e-03  1.72e-02 -9.79e-05 -8.51e-03  2.49e-02 -3.96e-02  2.39e-02
## 1276 -9.54e-04 -4.55e-03  5.41e-05 -8.02e-04 -9.21e-04  1.63e-03  4.75e-03
## 1277 -8.96e-03 -1.23e-02 -1.17e-03 -7.52e-03  5.48e-03  8.18e-04  1.04e-02
## 1278  2.64e-03  2.52e-03  1.15e-05 -1.58e-03  1.60e-03  3.35e-03 -4.92e-04
## 1279  1.18e-02  9.57e-03  1.21e-03 -5.13e-03 -2.31e-02  1.23e-03 -1.64e-02
## 1280 -8.01e-03  8.29e-02  6.89e-02 -1.25e-03 -5.19e-02 -5.54e-02  1.01e-02
## 1281 -8.75e-04  6.91e-03  1.25e-05 -2.93e-03 -6.49e-03  1.45e-03 -2.13e-03
## 1282 -6.35e-02  1.65e-03 -2.07e-03  2.60e-02 -5.77e-02  1.06e-01  1.05e-02
## 1283  1.65e-03  2.17e-03  1.71e-04 -5.31e-04  2.80e-06  4.33e-04 -2.51e-03
## 1284 -1.51e-03 -1.49e-03 -1.53e-04  8.16e-04  2.15e-03 -2.21e-03  6.33e-04
## 1285  1.02e-02 -6.76e-03 -1.14e-03 -4.08e-03 -9.94e-03 -2.62e-03 -2.80e-03
## 1286 -8.06e-03 -4.62e-02  5.09e-02  6.06e-02 -6.04e-03 -4.62e-02  1.25e-02
## 1287 -2.16e-04 -7.80e-03  7.50e-06 -2.64e-03  5.72e-03  9.06e-03 -4.11e-03
## 1288  7.59e-03 -4.52e-03  1.96e-04 -2.82e-03 -6.61e-03 -3.30e-03  5.13e-03
## 1289  6.79e-03 -1.29e-02 -3.58e-02 -4.12e-02  9.58e-03 -1.43e-02 -8.98e-03
## 1290  3.58e-03  1.66e-04 -9.59e-03 -1.11e-02  4.48e-03 -3.76e-03 -6.12e-03
## 1291  8.38e-04 -3.63e-02  9.08e-02 -7.10e-03 -9.62e-02 -1.16e-02  9.91e-02
## 1292  6.55e-02  2.41e-02  8.26e-04  2.81e-02 -5.93e-02  2.21e-03  8.26e-02
## 1293  1.59e-02 -5.38e-03 -1.35e-02 -2.35e-03  1.41e-03 -1.08e-02 -3.20e-03
## 1294 -3.76e-02 -2.54e-02  4.67e-02  5.36e-02  1.95e-02  2.90e-04  2.86e-02
## 1295 -1.70e-02 -8.31e-03  1.86e-03 -3.79e-03  1.60e-02  8.45e-03  8.99e-03
## 1296  1.25e-02  8.40e-03  1.09e-03 -6.17e-03  6.81e-04  9.03e-03  5.62e-04
## 1297 -5.61e-03  7.21e-03 -1.59e-04 -6.20e-03 -1.12e-02 -1.86e-03  2.35e-02
## 1298  1.63e-02 -5.91e-02 -7.59e-03  1.49e-02  1.71e-02  7.05e-02  5.80e-02
## 1299 -1.61e-01  1.07e-01  8.59e-03  3.63e-02 -1.15e-01  1.32e-01  1.09e-01
## 1300 -6.73e-03  2.16e-03  8.60e-04  4.51e-03  6.82e-03 -7.53e-03  1.93e-03
## 1301 -7.55e-03 -1.15e-03  2.02e-05  1.81e-03 -6.16e-04 -1.21e-03 -2.28e-03
## 1302  9.81e-03 -1.83e-03 -2.53e-02 -2.91e-02 -1.31e-02 -1.01e-02 -5.89e-03
## 1303  1.62e-03 -8.08e-03 -1.99e-03 -9.89e-03  2.73e-02 -3.30e-02  1.03e-02
## 1304  1.09e-03  7.25e-03  8.57e-04 -9.95e-03 -1.16e-02  1.41e-02 -9.42e-04
## 1305 -8.45e-03  1.02e-03 -5.44e-04 -6.86e-03  3.55e-04 -4.13e-03  9.36e-03
## 1306 -8.52e-03  1.73e-02  2.26e-04  3.22e-03 -8.07e-03 -1.77e-03  1.11e-02
## 1307 -1.45e-02  1.56e-02 -3.06e-02  1.74e-03 -1.93e-02  7.44e-03  3.44e-02
## 1308  7.19e-03  4.39e-03 -8.44e-04 -4.35e-03 -1.01e-02  1.07e-02 -3.80e-03
## 1309 -2.34e-02  3.69e-02  2.42e-03 -8.77e-03  9.78e-03  2.92e-02  1.67e-02
## 1310 -5.07e-03  1.02e-02  2.90e-04 -6.45e-03  6.11e-03 -2.09e-03 -2.91e-03
## 1311  2.49e-02 -3.19e-02 -2.96e-02  5.02e-03 -2.11e-02 -1.62e-02  3.74e-02
## 1312 -7.33e-02  3.88e-02  6.32e-02  7.19e-02 -3.90e-02 -1.33e-02  1.62e-02
## 1313 -6.10e-02 -2.00e-03 -1.68e-03  2.03e-02 -8.22e-02  7.61e-02  9.40e-02
## 1314  5.48e-02 -1.38e-02  2.32e-04  1.78e-02 -3.74e-02  1.59e-02 -6.25e-02
## 1315 -1.48e-02  1.54e-02 -2.91e-02 -3.38e-02 -7.00e-03 -1.26e-02  3.05e-03
## 1316  1.07e-02  2.23e-02  2.73e-03 -3.57e-03  2.13e-02  1.88e-02 -2.24e-02
## 1317  1.26e-02 -9.58e-03 -9.41e-03 -9.31e-04 -9.63e-03  6.56e-03  9.52e-03
## 1318 -1.54e-02  2.53e-02 -3.98e-02  2.93e-03 -3.84e-02  1.61e-02 -3.42e-02
## 1319  4.12e-04  1.57e-03 -2.32e-03  3.80e-05  1.00e-03 -2.63e-03 -2.19e-03
```

```
## 1320   1.99e-02 -1.63e-03 -1.82e-02 -9.24e-04 -1.84e-02 -2.32e-03 -1.53e-02
## 1321  -2.55e-03 -1.87e-03  7.16e-03  8.35e-03  3.57e-03  8.52e-06 -1.01e-03
## 1322  -1.93e-03 -3.85e-02  8.33e-04 -7.81e-03  2.61e-02 -1.82e-03  1.38e-02
## 1323  -1.68e-02  1.78e-02  2.45e-03  8.67e-03 -5.92e-03 -1.33e-02  1.63e-02
## 1324   2.31e-03 -8.54e-04 -4.36e-03 -4.93e-03 -2.51e-03 -1.72e-03  4.15e-04
## 1325   3.30e-03  1.53e-02 -3.21e-03 -1.00e-02  1.30e-03 -3.45e-02 -1.91e-02
## 1326   6.25e-03 -1.09e-02  1.51e-04 -3.61e-03 -9.15e-03 -7.62e-04 -1.25e-02
## 1327   6.80e-02 -5.20e-03 -3.26e-03  1.02e-02 -3.63e-02 -2.87e-02  8.28e-03
## 1328   3.31e-03  6.50e-04  1.25e-04  4.88e-03  1.42e-02 -1.03e-02 -2.33e-02
## 1329  -2.08e-03  1.50e-02 -1.67e-03 -8.93e-03  1.83e-03 -2.04e-02  8.85e-03
## 1330  -1.09e-02  1.11e-03 -2.68e-04 -5.53e-03  1.68e-02  4.78e-03 -1.95e-02
## 1331   1.81e-04  1.12e-03  6.12e-04  2.50e-03  4.75e-04 -2.09e-03 -8.25e-03
## 1332  -5.59e-04 -2.34e-04  6.89e-05  4.65e-04  1.33e-03  1.88e-04  1.38e-03
## 1333  -2.32e-02  6.83e-04  4.68e-02  4.83e-03 -2.66e-02  5.70e-02  4.13e-02
## 1334  -1.55e-01  8.76e-02  1.09e-02  4.44e-02  9.26e-02 -8.12e-03  2.35e-02
## 1335  -2.47e-02  3.07e-02 -4.13e-02 -1.01e-05 -2.19e-02 -2.09e-02 -3.80e-02
## 1336  -1.21e-03  8.15e-04  2.02e-04  8.74e-04  2.84e-05  1.57e-03  1.37e-03
## 1337  -5.96e-03  4.66e-03 -2.42e-05  1.24e-03  7.89e-05 -2.95e-03 -1.71e-03
## 1338   4.22e-03  3.32e-03 -4.03e-04 -5.35e-03 -1.23e-02  1.05e-02  7.68e-03
## 1339   1.03e-02  9.08e-03 -7.15e-04  2.72e-02  2.46e-02 -1.94e-03 -3.45e-02
## 1340  -2.31e-02 -4.87e-02 -2.98e-03  1.70e-02 -4.32e-02 -1.47e-02  5.11e-02
## 1341  -4.06e-03 -4.48e-03  5.02e-04 -7.77e-03 -2.22e-02 -6.64e-04  1.67e-02
## 1342  -9.04e-04  4.60e-03 -2.27e-04 -3.31e-03  8.80e-03 -8.17e-03  4.23e-03
## 1343   9.27e-03  4.44e-03  1.03e-03 -4.52e-03 -2.21e-02  9.38e-03 -1.08e-03
## 1344  -2.05e-02  2.50e-02  2.10e-03 -5.76e-03  8.63e-03  3.63e-03 -2.28e-02
## 1345   1.64e-02  1.75e-02  1.91e-03 -4.70e-03  3.28e-03  9.20e-03 -1.99e-02
## 1346  -2.00e-02 -1.56e-02  7.19e-04 -1.15e-02  3.94e-02 -2.39e-02 -2.84e-02
## 1347   1.93e-03 -1.04e-02 -8.37e-04 -3.65e-03  4.54e-03 -1.30e-02  3.63e-03
## 1348   1.55e-02 -4.69e-03 -2.71e-02 -3.49e-03 -2.29e-02  1.97e-02  8.00e-03
## 1349  -2.79e-04  6.52e-04 -1.39e-04 -9.55e-04 -1.97e-03  1.67e-03  2.82e-03
## 1350  -4.88e-02  2.28e-02  3.72e-03 -1.10e-02  3.11e-02  4.01e-02  2.49e-02
## 1351  -6.15e-03  9.36e-03  1.05e-03 -2.54e-03  7.21e-03  8.40e-03  1.30e-02
## 1352  -4.16e-03  6.52e-03  1.42e-02  2.73e-04 -1.86e-02  1.73e-02  1.16e-02
## 1353   3.13e-03 -6.12e-03  6.95e-04 -1.90e-03  1.17e-02  8.13e-03  4.38e-03
## 1354   2.22e-02  6.83e-03 -1.11e-01 -1.30e-01  2.04e-02  2.91e-02  5.10e-02
## 1355  -1.32e-01  2.38e-01  6.68e-03  3.52e-02  6.70e-02  1.21e-01 -9.72e-02
## 1356  -3.97e-02  8.75e-03 -7.43e-04 -8.07e-03  2.34e-02 -1.73e-02 -6.72e-03
## 1357   1.36e-03  5.78e-05 -4.44e-06 -9.64e-04  3.01e-03  7.15e-04 -7.67e-04
## 1358  -8.70e-04  2.37e-04 -1.22e-06  3.52e-04  1.94e-03 -2.51e-04  3.48e-04
## 1359   7.96e-03  8.17e-03  3.26e-04 -6.65e-03 -8.65e-03 -2.02e-03 -2.28e-03
## 1360  -1.42e-02  6.89e-03  1.62e-03 -5.15e-03  6.36e-03  1.42e-02 -2.28e-02
## 1361  -1.01e-02  1.31e-03  1.97e-04 -4.04e-03  9.58e-03  5.25e-03  1.51e-02
## 1362   3.03e-03  4.94e-03 -4.83e-03  7.13e-05 -2.13e-03  1.68e-03 -1.29e-03
## 1363  -1.94e-03 -1.92e-02 -2.10e-02  3.71e-04 -2.20e-02  1.43e-02  1.16e-02
## 1364  -1.58e-02  1.50e-03  4.70e-04 -6.10e-03  1.76e-02 -1.86e-03  8.00e-03
## 1365  -1.88e-02  1.31e-02 -2.77e-02  1.57e-03  2.08e-03  2.11e-02 -2.59e-03
## 1366  -8.00e-03  4.95e-03  6.55e-02  9.11e-04  1.98e-03  9.02e-02  1.40e-02
## 1367  -2.71e-02 -6.27e-03  3.90e-02  4.52e-02 -1.96e-02 -2.29e-02  2.65e-02
## 1368  -2.73e-02  1.32e-02  1.08e-03 -4.48e-03 -1.96e-02  1.22e-02  1.02e-02
## 1369   1.23e-02  2.07e-02 -3.29e-02 -4.38e-04  4.53e-03 -3.60e-02 -6.68e-03
```

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## 1370 -6.49e-03 -3.03e-02 -4.43e-03  1.47e-02  8.91e-02  3.70e-02  5.58e-02
## 1371 -6.72e-03  9.38e-03 -2.77e-02 -3.27e-02  9.22e-03  5.48e-03  2.67e-03
## 1372  1.26e-02 -2.48e-02 -1.55e-03 -3.76e-03 -1.25e-02 -1.80e-03 -8.61e-03
## 1373  2.39e-02 -7.84e-03 -1.45e-03 -9.42e-03 -6.75e-03  3.57e-03  2.28e-02
## 1374  6.26e-03  1.21e-02 -2.52e-02 -2.13e-03 -2.70e-02  7.03e-03 -1.75e-02
## 1375  3.20e-03 -3.23e-03  1.45e-03 -6.87e-04  7.86e-03 -1.50e-02 -1.16e-02
## 1376  2.77e-02 -1.44e-02  4.39e-02 -8.18e-03 -5.25e-02 -2.05e-02 -6.71e-02
## 1377 -3.34e-03  6.92e-04  2.18e-04  1.25e-03  2.14e-03  3.76e-04 -1.37e-03
## 1378 -2.76e-04 -1.32e-03  3.05e-03 -3.42e-04  1.10e-03 -1.95e-03 -1.44e-03
## 1379  4.92e-03  1.73e-03  1.85e-03 -7.61e-03  2.17e-02 -5.54e-03  1.51e-02
## 1380  5.61e-02 -7.67e-03  6.38e-02  1.42e-03  6.69e-02  7.52e-02 -6.89e-02
## 1381 -1.81e-02 -5.52e-03 -1.06e-03 -7.12e-03  6.36e-03 -1.74e-02  9.17e-03
## 1382 -2.51e-02  6.64e-03  3.48e-02  3.98e-02 -1.08e-02 -1.17e-02 -3.75e-03
## 1383 -2.15e-02  4.61e-04  5.01e-02  5.71e-02 -9.32e-03  1.39e-02  4.85e-04
## 1384  2.24e-04 -7.21e-04  3.62e-03  4.28e-03 -1.76e-03  2.27e-04  2.17e-03
## 1385 -7.18e-03  6.33e-03 -5.32e-05 -6.17e-03 -4.60e-03  1.36e-02  2.09e-02
## 1386 -9.18e-04 -2.87e-04  4.72e-04  1.47e-03  2.04e-03  9.77e-04  2.47e-03
## 1387 -3.82e-02  2.86e-02  2.24e-03 -7.80e-03  3.81e-02  2.50e-02 -8.16e-03
## 1388 -3.15e-02  1.28e-02  1.53e-03 -4.76e-03  3.22e-02  2.17e-02  2.78e-02
## 1389  1.78e-03 -2.10e-03 -8.71e-03 -9.90e-03  2.74e-03  2.75e-03  9.20e-04
## 1390 -9.70e-03  1.17e-02 -3.24e-02 -4.20e-03 -1.98e-02  2.36e-02 -2.40e-02
## 1391  8.98e-02 -4.65e-02  9.43e-03  4.49e-02  1.03e-01  7.75e-02  1.57e-02
## 1392 -8.32e-02  3.92e-02  4.49e-03 -7.41e-03 -4.92e-02  3.00e-02  5.01e-02
## 1393  2.14e-03 -1.22e-04  5.85e-04 -2.07e-03 -5.86e-03  1.89e-03 -4.44e-04
## 1394  1.02e-04  4.50e-04 -1.36e-05 -3.19e-04 -2.55e-04 -1.49e-07 -6.87e-04
## 1395  8.18e-03  3.21e-03 -1.50e-03 -5.45e-03 -1.50e-02  3.02e-03 -1.35e-02
## 1396  1.14e-02 -2.80e-02  6.45e-02 -4.22e-03 -6.88e-03  1.04e-01 -8.45e-02
## 1397  1.28e-02  7.49e-02 -1.81e-03  1.32e-02  4.07e-02  7.22e-02 -6.85e-02
## 1398 -5.90e-04 -2.48e-02  4.33e-06 -4.11e-03  1.51e-02  1.72e-03  1.52e-02
## 1399 -2.40e-03 -1.83e-04  3.76e-03  6.04e-04  2.84e-03 -5.75e-04  2.82e-03
## 1400 -1.25e-03  4.05e-03  2.85e-04  1.64e-03 -1.67e-03  3.11e-04 -5.03e-03
## 1401  1.36e-02 -1.58e-02 -3.16e-02  5.28e-03 -4.10e-02  2.54e-02 -2.78e-02
## 1402  4.52e-03  2.64e-03  8.35e-04 -2.12e-04  8.23e-03 -8.56e-03 -1.14e-03
## 1403 -9.80e-03 -7.47e-03 -2.76e-03 -1.62e-02 -3.10e-02  2.07e-02 -2.30e-02
## 1404 -1.08e-02  8.79e-03  9.76e-04 -9.51e-03  2.81e-02 -1.49e-02  1.35e-02
## 1405 -1.33e-02 -7.12e-04  2.09e-02  2.33e-02  7.72e-03 -1.38e-02 -9.00e-03
## 1406  1.33e-03 -9.10e-03 -2.31e-02 -2.69e-02 -2.75e-03  6.36e-04  2.66e-03
## 1407  4.41e-02 -8.71e-02  4.62e-04 -1.30e-02  4.25e-02  1.52e-04 -3.91e-03
## 1408 -5.15e-02  2.22e-02 -3.63e-04 -1.22e-02 -1.84e-03  2.45e-02  1.79e-02
## 1409  4.75e-03  1.15e-02  5.69e-04 -4.04e-03  4.28e-03 -4.79e-03 -1.18e-02
## 1410  7.53e-03 -5.25e-03 -1.00e-02 -4.75e-05  1.81e-03 -2.06e-03 -8.15e-03
## 1411  1.37e-04 -2.85e-05  5.26e-05 -3.46e-04  9.28e-04  1.01e-03  5.86e-04
## 1412 -8.40e-03  1.79e-02  1.26e-03 -3.36e-03  1.55e-02  1.11e-02 -4.76e-03
## 1413  1.24e-04 -1.37e-04 -1.07e-05  3.05e-05  1.52e-05 -1.29e-04  1.70e-04
## 1414 -6.81e-03  2.77e-02  3.62e-04 -7.45e-03 -3.09e-03  1.58e-02 -2.01e-02
## 1415  1.85e-02 -7.69e-04 -7.51e-04 -7.06e-03 -1.14e-02 -1.99e-02  1.78e-02
## 1416 -1.88e-02 -5.15e-03  2.14e-02  2.48e-02 -1.09e-02  9.07e-03  6.62e-03
## 1417 -6.86e-03 -2.67e-03 -5.15e-05  3.13e-03  9.62e-03 -9.64e-03  9.42e-03
## 1418  2.13e-04 -3.91e-04 -2.32e-04 -4.59e-03 -9.11e-03  9.34e-03  1.66e-02
## 1419 -1.72e-02 -9.14e-03 -3.18e-02 -1.42e-03  1.22e-02  1.01e-02  3.54e-02
```

```
## 1420 -3.73e-03 -2.21e-02 -1.70e-03 -1.27e-02  1.69e-02 -2.60e-02 -2.42e-02
## 1421 -5.79e-03  5.49e-04 -7.18e-05  1.42e-03 -2.46e-03 -4.19e-03  5.20e-03
## 1422  3.56e-03  1.42e-02 -2.53e-02 -3.10e-02  7.83e-03 -1.21e-02  4.83e-03
## 1423  1.68e-03 -6.48e-03  1.78e-03 -6.61e-03 -3.37e-02 -6.34e-03 -1.88e-02
## 1424 -4.08e-03  1.49e-02  1.01e-03 -4.09e-03  5.08e-03  9.30e-03 -1.36e-02
## 1425  3.49e-03 -1.46e-03 -3.65e-04 -3.20e-03 -9.44e-03  1.08e-04  4.06e-03
## 1426  1.32e-02  1.82e-02  3.96e-03 -9.97e-03  2.33e-02 -1.46e-02  2.18e-02
## 1427 -4.28e-02 -3.86e-03 -1.06e-03 -1.87e-02  3.70e-02 -9.37e-02 -9.00e-03
## 1428  1.09e-03 -4.23e-03  3.92e-04 -3.33e-03  7.81e-03  1.07e-02  1.35e-02
## 1429 -2.01e-02 -3.14e-03 -2.16e-04 -7.56e-03  2.51e-02  1.86e-02  1.18e-02
## 1430 -8.22e-03  6.74e-03  1.33e-03 -5.46e-03  2.18e-02 -2.31e-02  2.03e-02
## 1431  6.45e-04 -2.08e-04  3.04e-05  1.86e-04 -9.20e-04  9.79e-05 -2.99e-04
## 1432 -4.01e-03 -6.95e-03  2.27e-04  3.48e-03 -8.78e-04 -8.08e-03  2.13e-03
## 1433  7.24e-03  1.82e-03  3.68e-04 -1.59e-03  8.88e-03 -4.58e-04 -1.25e-03
## 1434  1.21e-02  3.03e-02 -1.41e-03 -1.37e-02 -3.09e-02  9.38e-03  3.85e-02
## 1435 -4.57e-03 -5.29e-03  8.22e-03  9.50e-03  2.68e-03 -8.19e-03  5.35e-03
## 1436  1.57e-03 -4.83e-02  3.12e-03 -9.98e-03 -1.89e-02  2.36e-02  2.51e-02
## 1437 -6.69e-02  5.03e-02  7.45e-03 -1.11e-02  2.49e-02  1.90e-02 -2.78e-03
## 1438  2.72e-03 -2.77e-03 -6.61e-03 -7.90e-03 -4.68e-03 -1.71e-05  3.61e-03
## 1439  5.96e-02 -5.64e-02  7.59e-02 -1.08e-03 -2.32e-02 -3.86e-03  6.94e-02
## 1440  4.13e-03 -2.10e-06 -5.10e-04 -2.95e-03  3.50e-03  5.45e-03  8.09e-03
## 1441  6.44e-04  7.42e-03 -7.16e-03  3.70e-04  2.53e-03  3.77e-03 -6.97e-03
## 1442 -9.02e-03  6.03e-02 -4.84e-02 -5.73e-02 -1.23e-02 -2.35e-02  4.93e-03
## 1443  1.65e-02 -1.95e-02 -8.28e-03  1.70e-02  4.15e-02 -4.85e-02 -1.01e-01
## 1444  3.72e-03 -1.21e-03 -1.99e-04  1.23e-03 -4.05e-03 -3.23e-03 -5.27e-03
## 1445  1.86e-02  1.94e-01 -3.85e-04  3.08e-02 -1.09e-01 -2.40e-02  9.57e-02
## 1446  4.69e-03  1.08e-03 -1.10e-03 -4.60e-03  3.16e-03 -1.85e-02  1.16e-02
## 1447  4.69e-03 -2.98e-04 -6.05e-04 -1.80e-03  1.03e-03 -7.27e-03 -4.45e-03
## 1448  1.11e-04 -1.78e-04 -8.00e-04 -8.91e-04 -5.00e-04  1.61e-04  4.63e-04
## 1449 -2.99e-03 -1.01e-03 -2.87e-04 -1.30e-03 -7.87e-04  1.47e-03 -6.38e-04
## 1450 -4.67e-03 -4.19e-03  4.74e-04 -6.51e-03  9.52e-03  1.42e-02 -2.15e-02
## 1451  2.47e-02 -8.10e-03  8.91e-06 -1.52e-02 -3.10e-02 -5.66e-02 -3.33e-03
## 1452 -3.11e-04  3.58e-04 -3.09e-05  3.08e-04 -9.51e-04  1.51e-05 -1.17e-03
## 1453 -6.46e-02  1.38e-01  1.08e-01  1.81e-03  9.00e-03 -7.09e-02 -4.63e-02
## 1454 -2.31e-03 -2.11e-03 -5.82e-04 -4.54e-03 -7.88e-03 -2.31e-03  5.85e-03
## 1455  9.01e-03 -1.86e-02 -6.21e-04 -5.53e-03  1.03e-02 -1.55e-02 -1.25e-02
## 1456 -6.29e-03 -1.52e-02 -6.83e-04 -7.99e-03 -2.39e-02  1.17e-02 -2.71e-03
## 1457  3.71e-02  2.45e-03 -3.34e-02  2.60e-03 -2.88e-02 -2.79e-02 -5.44e-03
## 1458 -2.71e-04 -1.32e-03 -1.94e-04  2.09e-04  8.83e-04 -1.11e-03  4.33e-04
## 1459 -1.39e-02 -7.89e-03 -8.04e-04 -6.05e-03  1.61e-02  1.16e-02 -3.41e-03
## 1460 -1.51e-02  2.99e-02  1.44e-03 -9.27e-03 -3.54e-02 -9.41e-03 -2.36e-02
## 1461 -6.18e-02  6.08e-03 -2.56e-03 -1.40e-02  2.43e-02 -7.77e-02 -4.27e-02
## 1462  2.95e-02  3.17e-02  2.10e-03  2.30e-02 -5.18e-02  1.26e-01  4.94e-02
## 1463 -9.40e-03  8.18e-03 -3.89e-04 -6.67e-03  1.17e-03 -2.12e-02  8.00e-03
## 1464 -1.97e-02  5.29e-03  3.25e-02  3.87e-02  1.38e-02  5.33e-03  6.31e-03
## 1465 -1.37e-02  1.36e-02 -9.44e-04 -9.35e-03 -1.92e-02  6.25e-03 -2.07e-02
## 1466  3.58e-03  5.11e-03 -4.93e-03  1.97e-04 -2.45e-04 -5.98e-03 -1.37e-03
## 1467 -6.91e-04 -1.54e-03 -2.76e-04 -8.87e-04  7.96e-04  6.52e-04 -2.13e-03
## 1468  1.54e-02  2.28e-02  3.60e-03 -4.87e-03  3.72e-02  1.80e-02  1.32e-02
## 1469 -1.00e-03 -3.99e-03 -4.97e-03  1.82e-04 -1.78e-03  3.30e-03 -4.40e-03
```

```
## 1470    1.81e-04 -3.85e-06  1.28e-05 -5.29e-05  7.29e-05  3.21e-05  1.04e-04
##          dfb.MrS1  dfb.MrS2  dfb.HrlR  dfb.JbIn  dfb.JbLv  dfb.JbSt  dfb.MntI
## 1       -8.48e-02 -7.19e-02  8.03e-02  1.20e-02  2.39e-02  6.15e-02 -4.95e-03
## 2       -8.14e-03 -3.45e-04  1.88e-03  9.87e-03 -4.76e-03  6.78e-03  4.32e-03
## 3       -6.69e-02 -5.72e-02  6.81e-02 -5.37e-02 -2.89e-03  1.19e-02 -1.56e-02
## 4       -2.35e-02  3.04e-03  1.23e-02 -1.07e-02  2.13e-02 -1.04e-03 -7.84e-03
## 5       -2.04e-02 -3.45e-03  2.64e-02 -7.50e-03  1.78e-02  1.14e-02 -1.23e-02
## 6        1.53e-02  1.30e-02 -9.67e-03 -3.82e-03  1.19e-02 -1.35e-02 -7.94e-03
## 7       -1.02e-02  4.86e-03 -6.61e-03 -2.77e-02  1.03e-02  2.85e-02  1.00e-03
## 8        3.50e-04 -1.12e-02 -1.31e-05 -2.32e-03  2.71e-03 -1.60e-03 -3.44e-03
## 9        2.02e-02  1.65e-02  1.32e-02  1.54e-02 -1.05e-02 -1.60e-03 -2.43e-03
## 10      -5.44e-03  3.49e-04 -9.52e-03 -1.18e-03 -1.90e-03 -3.44e-03  5.87e-03
## 11      -8.04e-03  3.20e-04 -5.64e-03 -1.64e-02  4.65e-03  5.48e-03 -1.48e-03
## 12       3.04e-02  2.81e-02  1.79e-02  2.77e-02 -3.08e-02 -6.86e-03  3.38e-02
## 13      -6.29e-04 -3.90e-02  4.14e-02 -9.35e-03  1.82e-02 -4.45e-03 -1.30e-02
## 14       8.19e-04 -1.01e-02 -7.81e-03 -1.12e-03  3.32e-03 -8.15e-03 -2.97e-03
## 15      -4.09e-02 -3.43e-02 -2.74e-02 -3.32e-02 -1.30e-02  8.28e-03 -3.34e-04
## 16       1.86e-03 -9.67e-03  5.90e-03 -1.09e-02 -3.59e-03  1.00e-02 -1.07e-03
## 17      -2.13e-03 -4.24e-02 -1.24e-02 -4.31e-02  2.39e-02  1.30e-02 -1.65e-02
## 18      -1.71e-03 -1.94e-02 -2.02e-02 -2.46e-02  6.74e-03 -1.56e-02 -8.23e-03
## 19       3.32e-03 -8.63e-04  2.50e-03 -4.34e-03 -2.25e-03  5.13e-03  1.02e-03
## 20       2.94e-02  2.52e-02  2.23e-02 -1.19e-02  3.40e-02 -2.68e-02 -2.94e-02
## 21      -4.04e-04 -4.87e-03 -4.67e-03 -5.81e-03 -5.18e-03 -9.66e-04  4.35e-03
## 22      -8.46e-02 -6.62e-02  3.97e-02 -6.20e-02 -6.42e-02 -9.29e-02  3.51e-02
## 23       1.78e-02  1.46e-02  9.34e-03 -4.71e-03  1.04e-02  7.80e-03 -1.98e-02
## 24       2.26e-02  1.77e-02 -3.23e-02 -9.69e-03 -1.25e-02 -2.58e-02  1.14e-02
## 25      -7.57e-02 -6.19e-02  3.68e-02  1.94e-02 -4.46e-02 -8.15e-02  2.16e-02
## 26      -8.74e-03  2.26e-02 -5.91e-03  3.53e-03  6.13e-03  3.91e-03  1.26e-02
## 27      -2.51e-02 -2.05e-02  5.18e-03 -4.84e-02 -3.10e-02 -3.36e-02  2.14e-02
## 28      -5.06e-03  5.08e-04  6.53e-03 -2.61e-03  2.52e-03  4.65e-03 -2.63e-03
## 29       1.75e-03  2.46e-04 -1.82e-03 -1.69e-03 -5.52e-04  2.01e-03 -1.09e-04
## 30       2.26e-02  1.88e-02 -1.17e-02 -5.40e-03 -1.54e-02  2.18e-02 -5.01e-03
## 31       1.45e-02  1.20e-02 -7.44e-03 -4.81e-03  4.92e-03 -1.39e-02 -3.44e-04
## 32      -6.76e-03  7.99e-04  9.79e-03 -2.32e-03  1.26e-03 -8.35e-03 -2.23e-03
## 33       1.63e-02  1.40e-02 -1.62e-02  1.60e-02  1.01e-02 -8.08e-03  1.30e-03
## 34       1.06e-01  1.25e-02 -3.33e-02  3.74e-02  1.97e-01  1.10e-01 -2.93e-01
## 35       6.10e-02  9.82e-03 -1.07e-02  2.52e-02 -2.94e-03  5.73e-02 -1.70e-02
## 36      -1.42e-03  1.25e-02  1.79e-03  1.33e-02 -5.17e-03  2.72e-03  3.07e-03
## 37       4.07e-02 -3.05e-03  4.37e-02 -6.58e-02 -1.93e-02  1.07e-02  1.91e-02
## 38       1.34e-03  1.20e-04  2.23e-03  3.66e-04  9.34e-05  1.83e-03 -1.49e-04
## 39      -3.36e-02 -1.64e-03 -1.98e-02  3.79e-02  2.97e-02  5.23e-02 -2.06e-02
## 40      -8.56e-03  2.33e-04  1.09e-02 -1.50e-02 -5.30e-03  1.43e-02  5.32e-03
## 41      -3.90e-04 -5.48e-03 -1.56e-03 -1.11e-03 -2.74e-04 -3.89e-03  2.49e-04
## 42      -1.35e-03 -1.65e-02  1.70e-02 -3.73e-03  1.15e-03  1.63e-02 -1.28e-03
## 43      -5.00e-02 -3.97e-02 -3.68e-02 -9.51e-02 -6.33e-03  2.55e-03  9.97e-03
## 44       1.10e-02  1.01e-02  1.03e-02 -3.78e-03 -1.17e-02 -3.98e-04  5.00e-03
## 45       1.13e-02  9.63e-03  8.99e-04 -5.01e-03 -1.16e-02 -9.67e-03  1.44e-02
## 46       3.62e-02 -2.11e-02 -6.35e-02  3.98e-02  1.63e-02  1.37e-02  6.96e-02
## 47       2.11e-02  1.83e-02 -5.60e-03 -8.19e-03 -1.26e-02 -3.28e-03  1.41e-02
## 48      -1.61e-02 -2.53e-03 -1.98e-03 -6.56e-03  1.31e-02  9.41e-03 -6.28e-03
```

```
## 49     3.74e-02   3.12e-02 -4.01e-02 -5.23e-03 -3.12e-03 -2.67e-02  6.62e-03
## 50     4.67e-03   2.13e-04 -7.42e-03  8.76e-03 -6.64e-04  5.18e-03  9.22e-04
## 51    -6.03e-02  -5.37e-02  8.04e-02 -4.96e-02  1.58e-01  1.45e-02 -1.88e-01
## 52    -6.25e-02  -5.34e-02 -3.55e-02  1.77e-02 -3.50e-02  4.20e-03  4.07e-02
## 53     5.56e-03  -3.11e-02 -6.54e-03 -3.73e-03 -1.79e-02  3.65e-02  1.41e-02
## 54    -2.69e-02   4.58e-03 -1.61e-02  2.53e-02 -2.30e-02  4.23e-02  3.82e-03
## 55    -3.01e-02  -1.06e-03  2.51e-02  3.02e-02 -4.90e-02 -2.74e-02  4.08e-02
## 56     4.10e-02   3.23e-02 -4.80e-02 -9.03e-03  4.72e-02 -3.40e-02 -6.61e-02
## 57    -1.12e-02   1.21e-03 -2.46e-03 -2.75e-03 -1.75e-02  2.34e-02  5.09e-03
## 58    -2.89e-02   1.61e-03  6.97e-02 -1.08e-02  4.74e-02  5.71e-02 -4.66e-02
## 59     8.00e-04   1.63e-02 -6.35e-03  3.30e-03  1.43e-03  1.10e-02 -7.59e-04
## 60     1.35e-06  -1.73e-03  7.55e-04  1.21e-03 -2.31e-04 -2.21e-04 -3.35e-05
## 61    -2.00e-02  -3.43e-03  3.00e-02 -9.02e-03 -2.78e-03 -2.14e-02  1.25e-03
## 62     2.64e-02   2.20e-02  1.23e-02 -8.67e-03 -4.17e-02 -2.55e-02  4.72e-02
## 63     2.70e-03  -4.09e-02  2.87e-02  2.05e-02 -1.61e-02 -3.89e-03  2.81e-03
## 64     2.95e-02   2.31e-02 -1.93e-02 -2.21e-03 -1.62e-02  2.24e-02  2.82e-02
## 65    -8.21e-04   4.11e-03 -6.16e-04  1.06e-03  5.40e-04  7.97e-04 -4.03e-04
## 66     4.50e-04  -8.25e-03  9.01e-03 -2.17e-03 -1.92e-03 -9.33e-04 -1.85e-03
## 67     4.03e-02   3.36e-02 -3.87e-02  3.10e-02 -6.93e-04  2.06e-02 -1.25e-02
## 68     2.98e-04  -7.84e-03  2.77e-03 -1.61e-03 -2.45e-03  7.68e-03  4.76e-03
## 69    -2.42e-02  -1.02e-03 -1.12e-02 -6.21e-03  3.07e-03  3.69e-02  1.47e-03
## 70     5.44e-02   7.26e-03  3.45e-02 -5.23e-02 -3.47e-02  1.28e-02  4.11e-02
## 71     3.35e-02   2.89e-02  1.13e-02  2.65e-02 -1.51e-03 -1.89e-03  1.64e-02
## 72    -2.70e-03  -1.42e-04 -1.15e-03 -8.44e-04  1.32e-03  1.85e-03 -4.88e-04
## 73     2.58e-02   2.04e-02 -1.86e-02 -7.19e-03  1.05e-03  1.20e-02 -3.17e-03
## 74    -2.15e-03  -2.44e-04  1.48e-04 -5.86e-04 -8.44e-05  1.10e-03 -2.74e-05
## 75    -4.58e-03  -7.47e-04  2.72e-03 -7.79e-03  3.14e-03 -5.23e-03 -2.15e-03
## 76     2.51e-03   2.01e-03  8.64e-05 -8.87e-04 -1.96e-03 -2.18e-03  2.28e-03
## 77     1.68e-02   1.46e-02  1.99e-02  1.20e-02 -9.31e-03  2.13e-02  1.71e-02
## 78    -1.81e-02  -3.58e-04  1.50e-02 -8.00e-03  2.56e-02  2.66e-02 -3.42e-02
## 79     1.83e-02   1.48e-02  2.63e-02 -8.44e-03  2.53e-02 -3.03e-03 -3.27e-02
## 80     1.52e-03  -2.76e-02 -1.06e-02 -5.17e-03 -1.28e-02  1.13e-02  2.12e-02
## 81    -2.16e-02   5.88e-05  6.89e-03  1.85e-02 -1.81e-02 -2.05e-02  2.18e-02
## 82     2.23e-02   1.81e-02  2.98e-02  1.66e-02  1.24e-02 -6.22e-04 -7.57e-03
## 83    -3.92e-04  -3.69e-05 -5.45e-05 -1.61e-04 -7.28e-05 -5.29e-04  2.08e-04
## 84    -1.52e-03  -1.62e-02 -9.27e-03  2.57e-02 -3.62e-07 -1.22e-02  6.63e-03
## 85    -9.16e-03   9.42e-05 -1.31e-02 -2.43e-03 -1.71e-02  6.39e-03  1.41e-02
## 86     6.98e-03   6.51e-03  3.50e-03  1.29e-02 -6.69e-03 -5.79e-03  1.52e-02
## 87    -3.85e-03  -2.67e-02  4.02e-03 -6.01e-03  1.50e-03  2.15e-02  5.20e-04
## 88     6.20e-03   5.70e-04  1.06e-02  1.99e-03 -2.74e-03  9.39e-03 -1.53e-03
## 89    -4.11e-03  -9.91e-04 -7.76e-03  4.09e-03 -5.26e-03 -5.55e-03  6.37e-03
## 90    -1.18e-01  -8.85e-02  9.25e-03 -8.09e-02  6.33e-02  8.21e-02  8.80e-04
## 91    -1.87e-02  -2.24e-03 -1.31e-02  1.47e-02 -1.96e-02  1.05e-02  1.30e-02
## 92     4.97e-02   3.88e-02 -8.33e-03 -1.41e-02 -1.49e-02 -2.52e-02  1.51e-02
## 93     4.42e-05  -3.30e-02  1.88e-03  2.51e-02 -1.34e-02  1.57e-02  1.60e-02
## 94    -3.12e-02   3.12e-03  4.39e-02  3.56e-02  4.19e-03  6.01e-02 -1.84e-03
## 95     1.63e-02   1.27e-02 -1.23e-02 -4.06e-03 -7.77e-03 -3.47e-03  1.03e-02
## 96    -1.50e-03   5.76e-04  1.34e-03 -4.19e-04  3.85e-03 -4.55e-04 -5.61e-03
## 97    -1.24e-02  -1.04e-03  1.99e-02 -4.87e-03 -1.54e-02 -3.24e-04  1.05e-02
## 98     1.73e-03   1.19e-04 -1.39e-03  8.18e-04  1.77e-03  2.51e-04 -1.52e-03
```

```
## 99    -6.64e-03 -6.34e-03 -6.33e-03  3.40e-03 -6.46e-04 -5.67e-05 -3.74e-03
## 100   -5.06e-03  3.93e-04  3.08e-04 -2.16e-03 -9.74e-03  2.80e-03  1.40e-02
## 101    6.75e-04  9.28e-02 -1.53e-02  1.88e-02 -8.25e-03 -8.99e-02 -1.43e-02
## 102    2.55e-02  2.14e-02 -3.43e-03 -7.95e-03  8.01e-03  3.03e-02 -1.09e-02
## 103   -3.78e-02 -3.43e-02  1.08e-02 -3.16e-02 -1.57e-02  3.81e-02  2.06e-02
## 104    1.04e-02  8.55e-03  8.92e-03 -3.01e-03 -2.84e-03 -1.16e-03  7.18e-03
## 105    1.58e-03  1.05e-02  1.20e-02 -5.97e-03  2.94e-03  8.57e-03 -7.28e-03
## 106    1.42e-02 -4.66e-03 -2.62e-02 -1.52e-02  8.82e-03  1.65e-02  2.73e-03
## 107   -1.57e-02  3.71e-03 -5.61e-03 -4.18e-03 -2.17e-02  1.37e-02  4.74e-03
## 108   -4.82e-02 -4.38e-02 -3.57e-02 -3.82e-02  2.31e-02  6.34e-03 -1.01e-02
## 109   -9.07e-03 -1.19e-03  1.98e-05  8.73e-03  4.26e-03 -9.78e-03 -3.92e-03
## 110    2.64e-02  2.05e-02  6.83e-03 -1.24e-02  1.06e-02 -2.65e-02 -1.28e-02
## 111    4.85e-02  3.87e-02  5.03e-02  3.09e-02 -4.88e-02  5.43e-02  6.20e-02
## 112   -4.56e-02 -3.77e-02  6.36e-03 -8.65e-02  6.48e-03 -1.44e-04  1.01e-03
## 113    1.44e-02  1.37e-02  1.69e-02 -2.05e-02  1.64e-02 -1.10e-02 -2.38e-02
## 114   -1.48e-02 -1.39e-03  1.21e-02 -5.65e-03  1.01e-02 -3.52e-03 -4.62e-03
## 115   -2.03e-03 -1.89e-02  1.11e-02  1.11e-02 -1.23e-02  7.50e-03  1.54e-02
## 116    4.18e-03  3.56e-03 -3.67e-03 -1.04e-03 -6.90e-03 -3.52e-03  5.73e-03
## 117    2.26e-02  1.86e-02  1.50e-02  1.57e-02  7.85e-03  2.42e-02 -1.61e-02
## 118   -3.69e-04  5.20e-05 -6.25e-04 -6.32e-05 -3.57e-04 -5.37e-04 -1.12e-05
## 119   -5.74e-04 -1.17e-02  9.08e-03 -2.90e-03  4.04e-03 -7.10e-03 -1.41e-03
## 120   -8.52e-03  1.50e-03 -1.39e-02 -4.37e-03  1.72e-02 -1.32e-02 -2.18e-02
## 121   -3.56e-04 -3.92e-02 -3.37e-02  6.08e-02  1.98e-02 -5.49e-03 -8.28e-03
## 122    4.11e-03 -6.98e-04  6.08e-03  1.45e-03 -6.38e-04 -2.36e-03  1.58e-03
## 123    3.33e-02 -5.07e-03  5.20e-04  1.37e-02 -1.13e-01 -3.52e-02  1.06e-01
## 124    2.25e-03  1.61e-03  7.03e-04 -3.78e-04 -2.84e-05 -3.20e-04 -1.46e-03
## 125    5.04e-02  1.09e-02  3.07e-02 -1.12e-01  6.01e-03  1.53e-02 -1.06e-02
## 126   -2.06e-02 -3.50e-03  1.87e-02  1.86e-02  4.65e-03  1.37e-02  8.00e-04
## 127    5.82e-02 -9.31e-03  1.07e-01  7.01e-02 -7.63e-02  1.03e-01 -8.52e-02
## 128   -4.41e-02 -3.74e-02 -2.67e-02  2.26e-02  1.39e-02  5.24e-03 -8.65e-03
## 129   -8.30e-03 -1.79e-03 -1.25e-02 -2.93e-03  1.17e-03 -9.70e-03 -1.88e-04
## 130   -2.17e-03  5.38e-04 -4.54e-03 -4.06e-04  2.36e-03  4.89e-03 -1.24e-03
## 131    3.22e-02  2.65e-02 -8.17e-04 -3.91e-02  5.73e-02 -7.47e-03 -3.51e-02
## 132    1.82e-02  1.53e-02 -8.36e-03 -4.44e-03 -1.13e-02 -1.43e-02  7.50e-03
## 133    4.44e-02  6.41e-03  1.27e-02 -1.01e-01  5.45e-02  9.39e-03 -3.93e-02
## 134    8.25e-04 -9.37e-03 -9.95e-03 -1.04e-03 -1.06e-02 -2.17e-03  7.52e-03
## 135   -6.33e-03 -6.17e-04  2.36e-03 -2.35e-03  7.23e-03 -2.19e-03 -3.85e-03
## 136   -4.12e-04 -1.36e-02 -6.81e-03 -2.98e-03 -8.67e-03  4.37e-03  7.13e-03
## 137   -7.94e-02 -6.64e-02 -3.14e-02 -1.42e-01 -2.90e-03  5.51e-02  1.81e-02
## 138    6.24e-03 -2.73e-04 -6.17e-03 -7.78e-03 -2.17e-03  1.74e-03 -2.48e-03
## 139   -2.36e-02 -4.13e-03  3.27e-02  2.36e-02  3.05e-02 -4.66e-03 -4.36e-02
## 140   -1.42e-02  8.60e-04  1.29e-02 -5.81e-03  1.13e-03 -1.65e-02  1.93e-04
## 141   -8.21e-02 -6.39e-02 -8.79e-02  2.63e-02 -1.01e-01 -9.72e-02  7.22e-02
## 142    2.09e-02  1.61e-02 -8.73e-03 -2.96e-03  1.73e-02 -1.40e-02 -1.27e-02
## 143    2.66e-02  2.39e-02  3.62e-02 -1.47e-02 -2.24e-02 -4.50e-03  4.24e-02
## 144    3.34e-02  2.57e-02 -8.70e-03 -9.29e-03  1.42e-02 -6.95e-03 -1.02e-02
## 145   -1.08e-03 -6.28e-03  4.11e-03  8.47e-03 -2.37e-03 -3.60e-03  2.45e-03
## 146   -1.72e-03 -1.72e-02 -7.90e-03 -3.66e-03  8.86e-03  1.25e-02 -4.67e-03
## 147    2.35e-02  1.96e-02  2.72e-02  1.74e-02  1.15e-02 -1.80e-02 -4.82e-03
## 148    1.30e-03 -1.81e-02 -1.53e-02  1.39e-02  1.31e-02  1.61e-02 -2.44e-02
```

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## 149   -8.49e-03 -3.29e-04 -1.11e-02 -2.26e-03  2.38e-03  1.38e-02  1.15e-03
## 150    3.06e-02  2.59e-02 -1.55e-02 -1.13e-02 -1.48e-02  1.68e-02  1.55e-02
## 151    2.00e-04 -1.22e-02  6.43e-03 -1.57e-03  4.33e-03  5.33e-03  2.36e-03
## 152    3.95e-03 -2.84e-04  6.39e-03  1.07e-03  1.07e-02 -2.61e-03 -8.43e-03
## 153   -1.18e-02  4.20e-03  2.96e-02 -3.50e-03 -4.36e-02  9.48e-04  5.13e-02
## 154    2.80e-04  6.94e-03 -1.32e-03  6.07e-04  7.25e-03 -2.36e-03 -1.13e-02
## 155    1.72e-02  1.47e-02  1.16e-02 -5.13e-03 -1.50e-02 -1.23e-02  5.08e-03
## 156    1.72e-02 -2.64e-03 -1.73e-02  6.03e-03  1.48e-02  1.95e-03 -1.72e-02
## 157   -7.29e-03  2.10e-04  1.47e-02  9.53e-03 -1.48e-03 -6.37e-04  9.43e-04
## 158   -2.00e-02  4.32e-03 -5.49e-03  3.75e-02  2.82e-02  2.37e-02 -1.74e-02
## 159    7.13e-03 -1.50e-04  1.65e-03 -1.00e-02 -1.55e-03  1.00e-02  5.43e-03
## 160   -1.32e-02 -2.08e-03 -5.58e-03 -4.68e-03  3.38e-03 -3.12e-03  3.81e-04
## 161   -7.76e-03 -1.38e-03 -5.63e-03 -2.99e-03  8.57e-04 -9.47e-03 -6.47e-04
## 162   -1.44e-03 -1.06e-02  2.44e-03 -3.45e-03  1.20e-03  4.54e-03  9.59e-04
## 163   -1.58e-02 -2.16e-03  1.73e-02 -6.18e-03  9.29e-03 -1.58e-02 -6.00e-03
## 164    3.17e-03 -1.34e-02 -7.76e-03 -1.51e-02 -8.68e-03 -1.13e-02  1.82e-03
## 165   -3.02e-03 -3.34e-02 -1.66e-02  2.22e-02  4.50e-03 -2.76e-03 -6.73e-03
## 166    7.01e-03  5.64e-03  2.60e-03 -1.34e-03 -9.31e-04  2.91e-03 -5.27e-03
## 167    9.95e-05 -4.57e-03  1.77e-03 -5.87e-04  2.93e-03 -1.03e-03 -5.24e-04
## 168   -1.36e-03  6.55e-05  1.85e-03 -7.12e-04 -1.62e-03 -1.72e-03  9.72e-04
## 169    1.24e-02  9.29e-03  2.83e-03  9.27e-03  1.50e-02 -1.12e-02 -1.61e-02
## 170    1.55e-02  1.21e-02  1.41e-02 -7.24e-03  1.26e-02 -3.28e-03 -7.04e-03
## 171   -3.24e-02 -1.63e-04  2.97e-02 -1.37e-02  2.38e-02  2.56e-02 -1.40e-02
## 172   -4.06e-02 -3.39e-02  7.55e-02 -9.62e-02  2.97e-03 -6.41e-02  8.36e-04
## 173    3.42e-02  3.02e-02  4.27e-02 -1.18e-02  1.48e-02  2.18e-02  8.17e-03
## 174   -1.69e-04 -1.24e-03 -7.68e-05 -3.52e-04 -1.20e-03  1.10e-03  1.55e-03
## 175    1.81e-03 -2.25e-02  3.02e-02 -3.85e-03 -1.14e-02  2.70e-02  1.13e-02
## 176    3.34e-03 -3.14e-02  4.56e-03 -5.00e-03  4.22e-02  2.95e-02 -1.92e-02
## 177    1.09e-02  8.47e-03 -1.21e-02 -4.46e-03  3.62e-03 -1.24e-02 -1.97e-03
## 178   -5.01e-02 -3.89e-02 -3.61e-02 -3.91e-02  4.28e-02  5.37e-02 -4.57e-02
## 179    2.55e-03 -1.09e-02 -8.97e-03 -4.07e-03  3.13e-04  1.03e-02  3.35e-03
## 180    1.83e-02  1.44e-02 -5.57e-03 -3.89e-03  2.34e-03 -1.36e-02 -2.43e-03
## 181   -2.20e-02 -4.44e-03 -2.94e-02 -9.32e-03  2.54e-02 -2.62e-02 -1.99e-02
## 182    2.74e-02  2.14e-02 -2.67e-02 -7.44e-03  1.16e-02  9.58e-03 -1.29e-03
## 183   -7.04e-02 -5.51e-02  1.13e-04  1.29e-02 -3.04e-02 -3.62e-02  3.16e-02
## 184   -6.44e-03 -4.09e-04 -6.84e-03  8.69e-03  7.98e-03 -2.31e-03 -7.60e-03
## 185   -1.06e-03  4.70e-03 -2.22e-03  5.28e-03  4.04e-03 -5.39e-03 -2.77e-03
## 186   -1.50e-03  1.39e-05 -3.00e-04 -4.00e-04  1.50e-03  9.31e-04 -7.32e-04
## 187    7.04e-03 -9.80e-04 -7.34e-03  4.56e-03  5.74e-03  1.97e-03  5.19e-03
## 188   -2.95e-02 -2.55e-02 -5.23e-03  2.87e-02 -2.79e-03 -9.69e-03  6.19e-03
## 189   -2.66e-03  3.27e-07  2.57e-03  3.16e-03  5.88e-03 -3.39e-04 -7.02e-03
## 190    1.01e-03  8.04e-04 -1.04e-03 -2.93e-04 -7.08e-04  3.84e-04  3.28e-04
## 191    4.60e-03 -2.24e-03  5.32e-04 -6.62e-03 -4.85e-03  1.44e-03  6.20e-03
## 192    1.95e-02  1.60e-02 -2.27e-02 -5.11e-03  4.47e-03  8.33e-03  5.61e-04
## 193    4.93e-02  5.35e-03 -3.91e-02 -4.70e-02  1.47e-02  9.12e-03 -6.26e-03
## 194   -1.03e-03  2.55e-02 -2.59e-02  3.46e-02 -1.11e-02  1.92e-02  1.42e-03
## 195    1.33e-03 -3.15e-04  1.16e-04 -1.31e-03 -1.70e-03  1.86e-03  2.73e-03
## 196   -2.19e-02  1.94e-03  1.02e-02 -4.36e-02  3.72e-02  4.00e-02 -2.88e-02
## 197    2.93e-02  2.75e-02  3.76e-02 -1.53e-02 -2.97e-02  2.19e-02  3.28e-02
## 198    3.31e-05  4.55e-03 -4.70e-03  1.60e-03  9.36e-04  3.13e-04 -1.38e-03
```

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## 199    2.02e-03  3.06e-06   2.22e-03   6.50e-04 -1.98e-04   8.09e-04 -3.02e-04
## 200    8.71e-04 -8.39e-05  -6.80e-04   2.31e-04 -1.70e-04   1.28e-03  4.69e-04
## 201   -3.15e-02 -5.22e-03   5.27e-03   2.37e-02 -4.04e-02   4.23e-02  3.54e-02
## 202   -6.36e-04  3.21e-03   3.43e-03   5.92e-04 -1.30e-03   2.91e-03  2.39e-03
## 203   -2.65e-03 -4.14e-02   2.73e-02  -1.24e-02  3.42e-02  -2.56e-03 -2.93e-02
## 204   -1.32e-02 -8.22e-04  -2.20e-02  -3.03e-03 -2.45e-02  -1.81e-02  3.30e-02
## 205    3.96e-02 -2.77e-03  -6.03e-03   1.53e-02 -1.80e-02  -7.18e-02 -1.92e-03
## 206    8.65e-02  1.71e-02  -1.07e-01   3.30e-02  1.49e-01   8.43e-02 -1.06e-01
## 207   -2.24e-03 -3.39e-02   6.55e-03  -3.74e-02  2.88e-03   1.37e-02  1.10e-03
## 208    2.61e-02  2.20e-02  -7.81e-03  -7.90e-03  1.38e-02  -2.64e-02 -4.00e-03
## 209    4.60e-04 -7.78e-05   7.63e-06  -4.75e-04  4.98e-04   4.53e-04 -3.11e-04
## 210   -2.79e-04  7.45e-03   7.19e-03   1.14e-03  4.55e-03  -6.47e-03 -3.56e-03
## 211    7.63e-02  7.57e-03  -1.02e-01  -1.74e-01  1.65e-02   7.89e-02  8.39e-03
## 212    4.74e-03  4.41e-03  -5.29e-03   3.08e-03 -5.75e-03  -7.83e-04  4.07e-03
## 213    1.79e-02  1.49e-02  -1.51e-02  -3.32e-03  2.89e-02  -3.60e-03 -3.79e-02
## 214   -2.61e-03  1.56e-03  -3.41e-03   7.54e-03  5.54e-03   4.05e-03 -9.01e-03
## 215   -6.23e-02 -5.68e-02   4.97e-02   1.62e-02 -2.80e-02  -7.23e-02  7.18e-03
## 216    2.58e-02  2.14e-02  -1.02e-02  -9.12e-03  2.73e-02  -2.14e-02 -3.91e-02
## 217   -4.85e-02 -4.22e-02  -2.88e-02  -3.48e-02 -1.18e-02  -6.93e-02  2.10e-02
## 218   -8.28e-02 -6.96e-02   6.49e-02   2.35e-02 -1.02e-02   2.19e-02 -1.56e-02
## 219    5.32e-03  5.11e-03   5.58e-04   2.74e-03 -2.43e-03  -4.36e-03  4.64e-03
## 220    2.87e-03 -5.21e-04  -3.20e-03   6.45e-04 -2.58e-04  -5.50e-03 -1.14e-03
## 221   -1.90e-04 -1.58e-04  -2.06e-05   4.69e-05 -2.30e-05  -8.45e-05 -3.91e-05
## 222   -1.81e-02 -4.18e-03   1.46e-02   1.38e-02  7.56e-03   1.02e-02 -9.86e-04
## 223    4.53e-04 -2.40e-02   1.30e-02  -4.99e-03  1.33e-02  -1.57e-02 -2.84e-02
## 224   -4.18e-05  3.19e-03   1.03e-03   4.76e-04 -2.08e-04   8.86e-04  6.92e-04
## 225   -5.38e-03  1.09e-04  -6.48e-03   1.13e-02 -6.35e-03  -1.09e-03  5.53e-03
## 226   -2.84e-03 -3.29e-04  -5.64e-04   3.47e-03  9.79e-04  -3.72e-03  1.99e-04
## 227   -1.33e-03 -1.53e-02   9.89e-03  -3.09e-03  1.03e-02  -1.00e-02 -3.05e-03
## 228   -6.07e-03  6.32e-04   6.79e-03  -3.38e-03 -1.32e-02  -5.66e-03  1.08e-02
## 229    5.38e-03  4.75e-03  -5.86e-03  -1.14e-03 -5.28e-03  -1.01e-03  2.46e-03
## 230   -5.49e-02 -4.53e-02   4.49e-02  -4.13e-02 -1.17e-02   4.53e-02  6.40e-03
## 231    1.98e-02  1.49e-02  -1.41e-02   1.46e-02  1.00e-02  -1.37e-02 -8.50e-03
## 232    1.17e-02 -2.25e-03  -2.73e-03   5.86e-03  4.29e-03   2.25e-02  1.79e-02
## 233   -3.67e-03  4.69e-04   4.89e-03  -1.04e-03  2.08e-03  -9.20e-04 -3.43e-04
## 234    9.84e-04  2.97e-02   4.64e-03   5.98e-03  9.15e-04   2.62e-02  1.08e-02
## 235    5.81e-02  1.21e-03  -2.40e-02   1.73e-02 -3.07e-02   6.43e-02  6.02e-03
## 236    3.07e-03 -1.18e-03   4.01e-03   1.66e-03 -3.20e-03   5.66e-03  6.71e-03
## 237    7.70e-02  1.10e-02  -1.13e-01   2.79e-02 -7.15e-02  -1.11e-01  4.69e-03
## 238    3.70e-02  3.45e-02  -2.02e-02   1.29e-02 -1.86e-03  -4.65e-03 -2.03e-03
## 239   -6.97e-03  2.10e-04   5.20e-03  -2.25e-03  1.01e-02   5.08e-03 -8.23e-03
## 240   -5.23e-02 -4.47e-02  -2.33e-03  -4.12e-02 -4.19e-02   6.55e-03  4.33e-02
## 241   -9.17e-05  1.37e-03   1.24e-03   1.62e-04 -2.30e-04   3.33e-04 -1.23e-04
## 242   -1.04e-03  9.16e-05  -1.95e-03  -4.95e-04 -1.42e-03  -1.33e-03  9.99e-04
## 243    1.62e-04 -1.86e-02   1.99e-02  -3.59e-03 -2.08e-02   1.99e-02  2.97e-02
## 244    5.44e-04 -3.34e-03   4.63e-04  -4.02e-04 -3.47e-03  -2.45e-03  3.71e-03
## 245    1.51e-02 -5.14e-04   3.17e-03   2.96e-02  6.45e-03   1.77e-02  6.31e-03
## 246    2.31e-04 -1.46e-02  -3.27e-03  -2.74e-03  1.26e-02  -2.46e-03 -2.34e-02
## 247   -9.67e-03 -1.23e-03   9.29e-04   1.02e-02  4.70e-03  -1.05e-02 -5.20e-03
## 248   -4.86e-03 -3.89e-04  -4.52e-03   5.65e-03 -1.33e-04   6.68e-03  1.24e-03
```

```
## 249   -1.59e-02 -1.05e-03 -9.62e-03  1.71e-02  2.39e-02  2.15e-02 -8.06e-03
## 250   -5.29e-03  7.91e-04 -2.43e-03 -1.12e-02 -1.04e-04 -1.30e-03 -1.51e-03
## 251    1.25e-02  1.12e-01 -1.70e-02  2.64e-02  2.91e-02  1.89e-02 -1.59e-02
## 252    2.31e-02  1.80e-02 -2.01e-03 -1.23e-02  4.77e-03 -3.71e-03 -3.90e-03
## 253    1.38e-02  1.06e-02  2.18e-03 -4.82e-03  5.61e-03 -1.25e-02 -2.24e-03
## 254    4.11e-02  3.51e-02 -1.63e-02 -4.53e-02  3.35e-03  4.03e-02 -8.16e-03
## 255    1.18e-04  2.65e-03 -1.56e-03  6.03e-04 -7.98e-04  1.86e-03  9.17e-04
## 256   -1.37e-02 -1.90e-03  2.58e-03 -4.97e-03 -1.48e-02 -3.14e-03  1.17e-02
## 257   -2.10e-03 -4.33e-02  1.24e-02  2.86e-02  2.20e-02  3.63e-02 -5.51e-03
## 258   -1.77e-03  1.19e-02 -6.88e-03  3.73e-03  3.54e-03  1.01e-03  6.67e-03
## 259   -1.08e-03  9.42e-05 -2.02e-03 -2.50e-04  4.11e-04 -1.74e-03 -6.71e-04
## 260   -5.71e-02 -4.66e-02  9.71e-03 -4.75e-02 -6.83e-02 -2.86e-02  5.86e-02
## 261   -1.47e-02  8.99e-04 -2.46e-02 -2.71e-02  6.65e-03  1.13e-02 -5.30e-03
## 262    6.63e-03 -5.83e-04 -7.24e-03 -5.74e-03  2.52e-03  6.69e-03 -4.95e-03
## 263    2.07e-02  1.87e-02 -2.02e-02  1.90e-02 -5.10e-02  2.85e-02  5.48e-02
## 264   -2.22e-02 -1.82e-04 -1.31e-02  6.13e-02  2.61e-02  1.20e-02 -3.40e-02
## 265   -6.41e-02 -5.19e-02  3.01e-02  2.18e-02 -3.97e-02  1.47e-02  3.55e-02
## 266   -1.86e-02 -2.27e-03 -8.75e-03  1.90e-02 -2.79e-03  1.14e-02  1.34e-03
## 267   -1.49e-02 -2.73e-03  1.12e-03  1.57e-02 -5.88e-03 -1.80e-02  6.63e-03
## 268   -1.48e-04 -1.31e-03 -7.63e-04 -1.58e-03 -1.31e-03  1.25e-03  1.18e-03
## 269   -4.41e-03  1.47e-03 -4.21e-03 -1.95e-03 -5.91e-03 -7.21e-03  2.88e-03
## 270    6.36e-03 -2.25e-04 -6.98e-03  2.15e-03 -1.31e-02  9.91e-03  3.97e-03
## 271    1.65e-02  1.55e-02 -7.86e-03 -6.71e-03  1.25e-03  1.69e-02 -8.95e-04
## 272    3.17e-02 -1.70e-02  5.00e-02  1.59e-02 -3.48e-02 -3.38e-02  8.80e-02
## 273    6.33e-04  7.57e-05  9.14e-04  1.94e-04 -2.20e-05  7.80e-04 -1.22e-04
## 274    2.94e-03  3.30e-04  4.98e-03  1.22e-03  1.21e-04  4.03e-03  6.65e-04
## 275    2.06e-02  1.63e-02 -3.16e-02  1.55e-02  1.08e-02 -6.03e-03 -9.46e-03
## 276   -4.85e-04 -1.44e-02 -7.15e-03 -5.53e-03  1.50e-02 -1.11e-02 -2.11e-02
## 277    3.23e-03 -1.06e-02 -6.90e-04 -1.30e-02  3.25e-03  5.02e-03 -1.02e-02
## 278   -1.47e-03 -5.14e-02  3.63e-02 -5.43e-02 -1.77e-02  4.51e-02  1.32e-02
## 279    2.50e-04 -1.78e-02 -1.09e-02 -2.79e-03 -3.48e-03  8.58e-03 -2.18e-03
## 280   -7.99e-04  5.07e-03  4.92e-03  8.35e-04  1.90e-03 -1.71e-03  1.32e-03
## 281   -6.33e-03  1.96e-03  1.01e-02 -2.95e-03  1.10e-02 -1.27e-03 -1.99e-02
## 282    1.99e-04 -1.50e-05  5.47e-04  1.59e-04  1.61e-04  1.00e-04 -4.86e-04
## 283    1.44e-02  1.30e-02  1.11e-02 -5.58e-03 -1.19e-02 -1.32e-02  1.19e-02
## 284   -8.68e-03  4.26e-04  1.63e-02 -3.01e-03 -1.41e-03 -1.14e-02  2.59e-03
## 285   -5.13e-02 -3.91e-03  1.77e-02 -1.78e-02 -5.55e-02  7.53e-02  4.12e-02
## 286   -1.14e-03 -9.63e-04 -8.42e-04  3.74e-04 -7.61e-04  8.25e-04 -2.97e-04
## 287    4.59e-03  8.27e-02 -6.09e-02  1.99e-02 -7.37e-02  6.74e-03  1.44e-02
## 288   -1.67e-05  2.77e-03  1.41e-03  4.90e-04  3.70e-04  2.20e-03 -3.10e-04
## 289    1.31e-03  7.63e-02 -5.93e-02  1.45e-02 -1.73e-02 -3.59e-02  3.70e-03
## 290    9.77e-03  7.76e-03 -8.40e-04 -3.72e-03  6.71e-03 -8.23e-03 -5.42e-03
## 291    4.72e-02  4.45e-02  5.01e-02 -1.47e-02 -3.06e-02  5.86e-02 -1.57e-02
## 292    2.23e-02  1.89e-02  3.35e-02 -9.82e-03 -2.04e-02  1.25e-02  2.32e-02
## 293   -2.54e-03 -2.71e-02 -1.46e-02 -4.56e-03  7.77e-03  8.78e-03 -9.22e-03
## 294   -6.27e-02 -5.27e-02 -2.86e-02 -4.30e-02  1.86e-02  5.28e-02 -1.40e-02
## 295   -3.31e-02 -3.58e-04  2.14e-02 -1.05e-02  1.03e-02 -3.14e-02 -6.05e-03
## 296   -9.02e-03  3.21e-04 -4.42e-03 -4.43e-03 -6.68e-03  5.46e-03  4.13e-03
## 297   -5.69e-02 -4.86e-02 -2.66e-02  3.43e-02  3.13e-02  1.53e-02 -2.99e-02
## 298   -1.93e-03  3.54e-04 -4.14e-03 -4.02e-04 -5.07e-03  1.52e-03  3.76e-03
```

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## 299   -9.05e-03 -9.33e-04 -6.03e-03 -1.63e-02  1.06e-02 -1.10e-02 -1.05e-02
## 300    4.24e-04 -7.22e-03 -4.23e-03  1.19e-02 -2.25e-03  2.86e-03  3.19e-03
## 301   -1.29e-03 -1.09e-03  9.73e-04  5.66e-04 -3.54e-04 -6.04e-04  8.34e-04
## 302    2.53e-02  2.17e-02 -7.73e-03  2.21e-02 -1.55e-02 -6.27e-03  1.49e-02
## 303    2.06e-02  1.72e-02  1.37e-03 -2.42e-02 -5.95e-03  2.22e-02  3.91e-03
## 304   -1.39e-03 -1.73e-04 -2.60e-03 -2.61e-03  5.37e-04 -2.22e-03 -7.04e-04
## 305   -2.65e-03  2.39e-02 -1.30e-02  3.02e-02  8.09e-03  1.74e-02 -9.59e-03
## 306    7.53e-04 -1.95e-04 -9.40e-04  2.99e-04 -4.03e-05 -6.63e-04 -1.47e-05
## 307   -2.42e-03 -1.10e-04 -3.39e-03  2.81e-03 -8.84e-04 -9.24e-04  1.57e-03
## 308   -1.09e-02  1.41e-03 -8.14e-03  1.55e-02  1.37e-02  1.06e-02 -1.61e-02
## 309   -1.11e-03 -1.90e-02  1.95e-02  3.01e-02 -1.29e-03 -3.34e-04  3.42e-03
## 310   -1.89e-02 -1.68e-03 -1.72e-02 -6.38e-03  3.29e-02 -2.29e-02 -3.02e-02
## 311   -2.80e-02 -4.85e-03  7.90e-03  2.36e-02 -4.65e-03  3.71e-02  2.37e-03
## 312    1.78e-03 -1.81e-02 -1.83e-02 -3.65e-03 -3.62e-02  1.89e-02  4.69e-02
## 313   -5.22e-03 -4.32e-02  3.64e-02 -1.12e-02  8.69e-03 -2.51e-02 -8.01e-03
## 314   -8.78e-03 -5.12e-04 -4.24e-03 -3.02e-03  5.18e-03  4.49e-03 -1.16e-02
## 315   -1.77e-02  1.18e-03 -3.60e-02 -1.09e-02  2.39e-02  3.03e-02 -4.07e-02
## 316    1.41e-02  1.14e-02  1.68e-02 -4.83e-03  1.06e-02 -1.14e-02 -5.25e-03
## 317    2.45e-02  2.23e-02 -2.33e-02  2.04e-02 -1.40e-02 -6.27e-03  7.47e-03
## 318    5.58e-02  7.46e-04  6.12e-02 -8.44e-02  5.63e-02 -3.66e-02 -6.12e-02
## 319    5.04e-02  4.37e-02 -3.32e-02 -1.29e-02  7.48e-03  2.56e-02 -3.34e-03
## 320   -2.56e-02 -1.34e-03 -1.39e-03  2.96e-02 -1.16e-02  1.59e-02  2.17e-02
## 321    2.86e-02  2.63e-02 -1.21e-02 -7.31e-03 -3.03e-02 -3.90e-03  2.32e-02
## 322    9.25e-04  1.92e-02  5.42e-03  3.18e-03 -1.18e-02  1.55e-02  1.09e-02
## 323    4.53e-03  3.68e-03 -1.36e-03 -5.31e-03 -2.48e-03 -3.60e-03  2.34e-03
## 324    4.54e-02  6.19e-03  3.91e-02 -1.06e-01 -3.24e-02  4.80e-02  2.52e-02
## 325    5.38e-03 -1.49e-04 -4.89e-04  1.27e-03 -4.31e-04  7.53e-03  4.36e-05
## 326   -1.04e-02 -1.46e-03  6.28e-03  1.05e-02 -1.31e-02 -1.48e-03  6.27e-03
## 327   -1.14e-02  3.09e-04  4.01e-03  8.70e-03 -7.73e-03 -1.31e-02 -7.84e-03
## 328    6.41e-02 -1.14e-03 -7.61e-02  2.50e-02  5.03e-02  6.25e-03 -6.05e-02
## 329    3.24e-02  2.81e-02  2.04e-02  2.30e-02 -2.48e-02 -2.29e-02  2.43e-02
## 330    8.26e-03 -2.29e-03 -1.22e-02  3.61e-03  1.38e-02  1.78e-03  4.33e-04
## 331    3.08e-04 -1.42e-02 -7.85e-03  9.34e-03 -4.46e-03 -1.64e-03  4.63e-03
## 332   -2.06e-02  3.68e-04 -7.15e-03 -9.29e-03 -2.65e-03  1.11e-02 -3.25e-03
## 333    1.99e-02  1.80e-02  2.46e-02 -4.71e-03 -2.48e-03 -1.17e-03  1.27e-02
## 334   -8.05e-03  9.05e-04  1.23e-02 -3.14e-03 -9.05e-03  1.63e-02  1.29e-03
## 335    5.30e-03  2.26e-04  3.96e-03  1.74e-03  8.53e-03  8.46e-03 -1.08e-02
## 336   -2.39e-02 -9.34e-04  9.13e-03  6.55e-02  7.74e-03 -2.43e-02 -2.16e-02
## 337    4.66e-02  5.28e-03  1.98e-02 -1.08e-01 -1.22e-02 -6.33e-02 -3.68e-03
## 338    2.79e-02  2.12e-02  3.95e-02  1.99e-02  3.10e-02 -2.39e-02 -2.95e-02
## 339   -1.67e-04 -2.52e-03  2.41e-03  1.33e-03  3.96e-05 -1.78e-04  9.73e-05
## 340   -3.08e-03 -5.12e-05  1.94e-03 -9.08e-04 -3.74e-04  2.27e-03 -3.26e-04
## 341   -1.18e-05  1.08e-02 -9.72e-04  2.01e-03  4.44e-04  7.74e-03  1.24e-03
## 342    9.89e-04 -1.58e-02 -1.44e-02  1.15e-02  4.67e-03 -1.27e-02 -1.21e-02
## 343    2.57e-02  2.26e-02  1.95e-02 -6.27e-03 -4.26e-02 -1.80e-02  3.39e-02
## 344   -3.54e-03 -3.52e-02  2.47e-02  2.08e-02  2.52e-02  1.29e-02 -3.46e-02
## 345    4.98e-04  4.59e-04  5.99e-05 -9.75e-05 -5.22e-04  2.40e-04  5.00e-04
## 346   -2.02e-04 -1.61e-02 -7.70e-03 -2.81e-03  6.91e-03 -1.21e-02 -5.63e-03
## 347    4.37e-02  3.60e-02 -4.73e-02  3.16e-02 -1.11e-02  2.01e-02  3.11e-03
## 348    2.80e-02  2.30e-02 -3.12e-02 -4.57e-03 -4.45e-02 -2.35e-03  3.85e-02
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## 349    2.31e-02   1.82e-02   1.75e-02  -7.65e-03   2.80e-03  -1.67e-02  -2.14e-02
## 350    3.62e-03  -2.36e-04  -2.92e-04   1.67e-03   4.04e-03   4.25e-04  -2.85e-03
## 351   -2.69e-04  -3.27e-02   1.46e-02  -7.52e-03   1.04e-02  -4.07e-03  -6.85e-03
## 352   -5.33e-03  -4.77e-04  -1.43e-03  -1.21e-03   2.28e-03   2.43e-03   1.29e-04
## 353   -1.04e-02   6.12e-04  -1.56e-02  -4.38e-03   1.25e-02  -5.00e-03  -2.39e-02
## 354    2.56e-03  -2.16e-02   1.28e-02  -2.40e-02  -3.04e-04   2.24e-02   3.29e-03
## 355   -1.83e-02   1.32e-03  -1.73e-02  -8.25e-03  -1.75e-02  -5.08e-03   1.14e-02
## 356   -2.45e-03  -3.23e-04   7.74e-04  -9.03e-04  -1.76e-03  -7.52e-04   1.60e-03
## 357    2.28e-02   1.72e-02  -2.52e-02   1.61e-02   1.95e-03  -1.83e-02   4.04e-04
## 358   -2.81e-02  -2.55e-02   4.29e-02  -2.59e-02   6.71e-04  -1.73e-02  -2.59e-03
## 359    1.05e-03   1.06e-03   7.38e-04  -5.92e-04   9.98e-05  -8.84e-04  -3.78e-04
## 360   -4.48e-03  -3.83e-04   2.97e-03   4.59e-03  -1.45e-03  -4.45e-03   4.10e-04
## 361    5.76e-03  -5.52e-04   7.34e-03   1.54e-03  -3.26e-03   3.08e-03   1.48e-03
## 362   -4.54e-03   6.85e-04   5.93e-03  -8.73e-03   3.74e-03  -1.28e-03  -3.11e-04
## 363    2.22e-02   2.05e-02   2.38e-02  -1.43e-02   7.51e-03  -1.80e-02  -5.85e-03
## 364   -5.66e-02  -4.94e-02  -7.29e-02   2.68e-02  -2.31e-02   5.51e-03   2.84e-02
## 365   -6.15e-03  -1.68e-04  -9.06e-03  -1.90e-03   9.54e-03   9.24e-03  -2.15e-03
## 366    4.81e-03  -8.59e-04  -9.03e-03   2.47e-03   3.06e-03   2.33e-04  -2.31e-03
## 367   -7.87e-02  -5.76e-02  -2.82e-02   2.33e-02  -1.02e-01  -3.74e-02   1.32e-01
## 368    2.80e-03   2.23e-03  -3.37e-03   2.04e-03  -9.35e-05  -2.37e-03  -6.65e-05
## 369    4.45e-02  -1.28e-03   2.64e-03  -5.12e-02  -2.54e-05   8.70e-03   9.26e-03
## 370    5.09e-02   4.18e-02   4.87e-02   3.88e-02   1.83e-02   3.29e-02  -1.62e-02
## 371   -6.97e-02  -5.56e-02   6.73e-02   1.15e-01  -1.63e-02  -2.94e-02   2.26e-02
## 372    1.74e-02   1.40e-02   7.07e-03  -5.73e-03   5.68e-03  -1.46e-02  -1.23e-03
## 373    2.82e-02   2.20e-02  -3.26e-02   2.07e-02  -1.78e-03   1.23e-02  -1.22e-03
## 374   -3.41e-05  -1.05e-03  -4.65e-04  -1.48e-04   7.82e-04   3.32e-04  -6.86e-04
## 375    1.06e-02   8.34e-03  -1.23e-02  -3.24e-03  -6.22e-03  -1.11e-02   3.99e-03
## 376    1.79e-02   1.46e-02   2.17e-02   1.06e-02   4.73e-03  -5.52e-04   7.51e-04
## 377    6.74e-03  -1.59e-03   9.29e-03   4.94e-04   3.28e-03   1.22e-02  -8.86e-03
## 378   -2.48e-03  -3.68e-04  -3.54e-03  -7.55e-04   9.88e-04  -1.15e-03  -2.50e-04
## 379   -8.03e-02  -8.01e-02   7.85e-04   1.07e-01   3.17e-02   5.61e-02  -2.51e-02
## 380    1.61e-02   1.36e-02  -1.53e-02  -3.27e-03   9.64e-03  -1.21e-02  -1.14e-02
## 381   -1.80e-03  -2.23e-02  -8.96e-03  -4.42e-03  -2.01e-02  -4.05e-03   1.71e-02
## 382   -1.37e-02  -2.65e-03  -2.89e-03  -5.31e-03   8.52e-04   7.07e-03  -1.58e-03
## 383   -6.49e-02  -5.56e-02   1.89e-02   2.62e-02  -4.71e-02  -8.90e-02   3.15e-02
## 384   -2.78e-02  -6.18e-03   2.91e-02  -1.03e-02   2.87e-03   1.42e-02  -8.65e-04
## 385   -1.41e-02  -1.45e-03   9.19e-04   1.28e-02  -3.59e-02  -2.67e-03   3.03e-02
## 386   -4.59e-02  -4.02e-02  -4.70e-02   2.67e-02  -6.40e-03   3.96e-02   4.12e-03
## 387    3.04e-04  -8.98e-03  -7.16e-03  -5.23e-04   8.75e-03   6.11e-03  -2.12e-03
## 388   -8.86e-06   3.57e-03  -2.19e-03   7.06e-04   8.40e-04  -1.48e-03  -4.96e-04
## 389    2.40e-05  -1.85e-02  -1.36e-02  -3.37e-03   5.46e-03   1.49e-02  -4.32e-04
## 390    4.34e-02   4.10e-02   3.00e-02  -1.32e-02  -3.77e-02   2.54e-02   6.12e-02
## 391    7.32e-04  -6.15e-03   1.87e-03   4.20e-03  -9.18e-04   3.08e-03   3.76e-04
## 392   -1.06e-02  -1.98e-03  -5.70e-03   8.80e-03  -1.46e-02  -3.11e-03   2.34e-02
## 393   -3.58e-03   1.35e-03  -4.34e-03  -1.25e-03  -3.74e-03   8.46e-03  -3.55e-03
## 394    3.37e-03  -5.90e-04   1.08e-03   1.55e-03   1.74e-04   6.35e-04   1.15e-03
## 395   -9.73e-03  -2.68e-04   1.72e-02  -2.22e-03  -8.74e-03   1.51e-02   1.17e-02
## 396   -8.69e-03  -1.23e-03   1.79e-03  -3.23e-03   5.16e-03  -9.58e-03  -1.49e-03
## 397    2.10e-03  -2.02e-02  -5.19e-03  -3.13e-03  -1.70e-02  -2.53e-03   1.59e-02
## 398    4.17e-02   3.56e-02  -6.20e-02   3.42e-02  -4.94e-02  -3.91e-02   3.93e-02
```

```
## 399   -1.58e-02   4.81e-03  -6.22e-03  -9.90e-03  -1.33e-02  -4.22e-03   2.56e-02
## 400   -1.84e-02  -3.00e-03  -2.57e-02   1.76e-02   1.23e-03   2.25e-02   2.38e-03
## 401    1.36e-03  -1.76e-02   7.61e-03  -6.62e-03  -7.49e-03   4.22e-04  -9.39e-03
## 402    2.34e-04  -7.09e-05   2.74e-04   4.96e-04   2.17e-04  -4.22e-04  -3.91e-04
## 403    2.62e-02   2.04e-02  -1.52e-02  -6.28e-03  -2.29e-04  -5.79e-03  -7.15e-03
## 404    3.43e-03  -5.29e-04  -4.19e-03   7.14e-03   7.12e-03  -6.96e-03  -4.43e-03
## 405   -1.10e-03  -1.49e-02  -4.59e-03  -2.03e-03  -8.84e-03   1.27e-02   9.84e-03
## 406    6.40e-02   8.05e-03   5.96e-02   1.86e-02  -7.37e-02  -8.50e-02   6.15e-02
## 407   -1.10e-02  -3.92e-04   1.18e-02   9.99e-03  -1.16e-02  -2.53e-03   1.99e-02
## 408   -7.98e-03  -1.27e-03  -3.39e-04  -2.88e-03   5.07e-03  -1.03e-02  -1.71e-03
## 409    1.04e-02  -2.09e-03  -2.22e-02   3.90e-03  -1.34e-02   1.40e-02   1.44e-02
## 410   -1.29e-04  -2.72e-02  -1.94e-02  -4.45e-03  -8.11e-03  -6.51e-03   2.10e-02
## 411    1.85e-02   1.49e-02   1.46e-02   3.83e-02  -2.70e-03  -1.81e-02   3.96e-03
## 412   -6.86e-03   2.83e-03   1.63e-02  -6.06e-03   1.84e-03   1.84e-02  -5.59e-03
## 413   -1.76e-03   1.05e-02   6.99e-03   4.86e-04   2.57e-03   2.70e-03  -7.69e-03
## 414   -4.55e-03   4.92e-04  -6.23e-03   6.87e-03  -4.73e-03  -6.20e-03   3.73e-03
## 415   -5.58e-02  -4.78e-02  -1.30e-02   1.65e-02  -3.14e-02  -3.18e-02   2.06e-02
## 416    1.86e-02   1.07e-01  -8.15e-02  -1.35e-01  -1.90e-02   3.83e-03   1.45e-02
## 417   -2.08e-02   5.54e-05   2.24e-02  -7.75e-03  -6.31e-03  -1.75e-02   5.14e-03
## 418    1.35e-02  -7.42e-03   1.73e-02   4.50e-03   2.72e-02   5.01e-03   2.66e-03
## 419    1.63e-03  -2.55e-02  -1.67e-02  -4.03e-03   6.97e-03  -1.78e-02  -7.51e-03
## 420    1.62e-03  -1.44e-04  -8.67e-04   6.70e-04  -5.45e-04   1.53e-03  -3.24e-04
## 421   -4.75e-03  -4.93e-04  -6.28e-03   5.00e-03   1.36e-03  -1.63e-03  -5.52e-03
## 422    6.68e-02   1.39e-02   8.34e-03  -6.08e-02  -3.63e-02  -3.23e-02   1.37e-02
## 423   -5.25e-02  -4.26e-02  -3.10e-02  -4.35e-02  -1.23e-02   6.08e-02   1.11e-02
## 424   -3.62e-03   1.16e-03  -4.96e-04  -1.51e-03  -6.42e-03   6.95e-03   3.86e-03
## 425    2.22e-04  -1.58e-02   5.33e-03   9.93e-03  -2.26e-03  -1.23e-02   4.34e-03
## 426   -6.97e-03   2.62e-03  -1.44e-02   1.25e-02   2.22e-02  -4.78e-03  -2.29e-02
## 427    7.11e-03   6.95e-03   3.87e-03  -3.53e-03   5.52e-03  -6.13e-03  -6.19e-04
## 428   -4.27e-03   3.46e-03  -6.46e-03   1.50e-02   4.17e-03   1.84e-02  -2.09e-03
## 429    1.52e-04   3.48e-03  -2.44e-04   5.71e-04   7.47e-04   2.69e-03  -2.53e-03
## 430   -3.30e-03   4.75e-04   3.71e-03  -1.47e-03   5.97e-03  -9.36e-04  -8.36e-03
## 431    3.49e-02   2.54e-02   2.48e-02   6.47e-02   4.97e-02  -6.92e-03  -4.44e-02
## 432    1.32e-02   1.13e-02   1.20e-02  -4.15e-03  -1.11e-02  -2.24e-03   1.94e-02
## 433   -3.65e-04  -4.00e-03   3.00e-04   2.61e-03   2.44e-03  -9.96e-04  -1.92e-04
## 434   -1.25e-02   7.26e-04  -2.22e-02   1.70e-02  -1.91e-02  -1.75e-02   1.42e-02
## 435   -5.55e-04   1.44e-02  -1.47e-02   3.63e-03   4.98e-04  -7.03e-03   4.09e-03
## 436    4.97e-02  -2.54e-03  -3.56e-02   1.95e-02  -1.08e-01   2.14e-02   1.45e-01
## 437    1.36e-02   1.18e-01  -8.47e-02  -1.52e-01  -7.75e-02   7.15e-02   4.82e-02
## 438    2.08e-02   1.71e-02   7.37e-03  -8.33e-03   1.21e-02   1.07e-02  -1.02e-02
## 439   -1.10e-02   3.08e-03  -5.05e-03  -5.30e-03  -3.14e-02  -1.22e-03   2.45e-02
## 440    6.56e-02   6.71e-03  -3.38e-03   2.44e-02   4.63e-02   1.44e-02  -1.21e-02
## 441    8.74e-04   6.87e-02  -5.60e-02   1.50e-02   2.91e-02  -7.75e-02   3.28e-03
## 442   -1.10e-02   7.83e-04  -1.90e-02  -3.05e-03   2.51e-03  -3.20e-03   3.77e-03
## 443    1.65e-02   1.52e-02   1.89e-02  -8.86e-03  -7.33e-03  -1.30e-02  -1.68e-03
## 444   -6.45e-02  -5.43e-02   9.34e-02  -5.55e-02  -5.99e-02   1.41e-02   6.08e-02
## 445    1.78e-03   2.04e-04  -2.50e-03   6.71e-04   1.91e-03   2.18e-03  -2.83e-03
## 446    1.48e-02   1.08e-02  -5.51e-03  -2.85e-03   1.27e-02   4.04e-03  -9.75e-03
## 447   -5.52e-03  -5.80e-03  -1.64e-03   3.09e-03  -3.03e-03   6.01e-03   7.79e-04
## 448   -3.67e-05  -2.60e-06  -3.74e-05  -9.70e-06  -2.69e-05  -1.80e-05   4.69e-05
```

```
## 449     5.33e-03   4.43e-03 -2.34e-03 -1.89e-03 -4.40e-03 -1.57e-03   2.75e-03
## 450    -9.40e-03  -9.02e-04   7.99e-03 -2.45e-03   1.34e-02 -2.18e-03  -1.05e-02
## 451     2.65e-02   2.25e-02 -1.33e-02 -8.18e-03   3.33e-03 -2.44e-02  -4.88e-03
## 452    -1.62e-02   1.99e-03   1.03e-02 -6.08e-03 -4.70e-02   3.54e-02   3.36e-02
## 453     6.77e-03   8.70e-05 -1.79e-03   2.12e-03   6.55e-03 -4.73e-03  -6.43e-03
## 454     5.88e-03   7.12e-02 -1.73e-02   2.06e-02 -3.48e-02   5.24e-03   1.34e-02
## 455     5.77e-05   3.57e-04 -2.72e-04   9.61e-05   2.09e-04   2.37e-04  -2.21e-04
## 456    -6.98e-04   9.84e-03   8.68e-03   1.06e-02   1.07e-03   2.45e-03   9.37e-03
## 457    -2.09e-04 -5.17e-03   2.64e-03   2.69e-03   2.96e-04 -3.08e-03  -2.88e-03
## 458    -3.53e-02 -3.32e-02   5.01e-03   1.36e-02   1.03e-02 -2.56e-02  -5.87e-03
## 459    -1.37e-03 -2.17e-02   6.73e-03   3.41e-02   5.51e-03   2.28e-02  -6.13e-03
## 460     3.24e-02   3.10e-02   2.62e-03   2.23e-02   1.08e-02 -1.88e-03  -1.47e-02
## 461    -2.88e-03 -3.34e-02   2.14e-02 -7.55e-03 -2.33e-02 -5.03e-03   2.32e-02
## 462     2.07e-02   1.61e-02 -1.16e-02 -6.66e-03 -1.85e-02 -3.96e-03   1.28e-02
## 463     4.83e-03   3.76e-03 -1.83e-03 -6.45e-03 -1.08e-03 -4.59e-03   1.18e-03
## 464    -3.28e-02 -2.61e-02   5.16e-03 -6.57e-02 -1.69e-03   2.86e-02   5.99e-03
## 465     4.97e-03   4.07e-03   5.64e-04 -1.85e-03 -8.13e-03 -3.90e-03   6.94e-03
## 466    -1.33e-02   9.42e-04 -1.20e-02 -3.37e-03   4.11e-03 -5.48e-03   3.79e-03
## 467    -1.16e-05   8.12e-06 -3.29e-05 -9.04e-06   2.17e-05   4.30e-05  -4.02e-05
## 468    -3.37e-04 -9.47e-03 -1.24e-03 -2.96e-03 -7.91e-03   3.51e-03   3.84e-03
## 469     2.69e-03 -1.42e-02 -5.18e-03 -9.98e-04   5.57e-04   1.42e-02   5.29e-03
## 470     8.65e-02 -2.02e-02 -2.66e-02   1.67e-01   9.30e-02   1.46e-02  -7.59e-02
## 471    -2.11e-02 -3.89e-03   2.22e-02 -8.33e-03   8.92e-03 -1.88e-02  -6.71e-03
## 472    -1.56e-03   1.59e-05 -5.74e-04 -6.33e-04   4.07e-03 -6.38e-04  -3.59e-03
## 473    -1.05e-02 -3.70e-04   1.49e-03 -4.09e-03 -1.41e-03   7.34e-03  -1.15e-03
## 474     5.97e-04 -3.53e-03   9.56e-04   2.35e-03   6.42e-04 -1.44e-04  -1.89e-03
## 475    -2.08e-02 -1.19e-03 -2.18e-02 -3.70e-02   1.52e-02 -2.79e-02  -8.05e-03
## 476    -1.60e-02 -2.35e-03   3.21e-03 -6.31e-03 -1.94e-03   9.94e-03  -3.72e-03
## 477    -1.89e-02 -3.52e-03 -2.38e-02   1.78e-02 -2.17e-03   9.89e-03   1.35e-03
## 478    -1.01e-02   3.49e-03 -2.06e-02 -8.27e-03 -1.13e-02   9.45e-03   8.85e-03
## 479    -1.10e-02 -1.69e-03   1.29e-02 -3.41e-03   4.28e-03 -2.68e-03   3.64e-04
## 480     4.79e-02   2.47e-03 -2.76e-02   1.82e-02 -2.80e-02   2.96e-03   1.35e-02
## 481     5.85e-02   1.07e-02   1.39e-02 -5.09e-02   2.63e-03 -7.95e-02  -7.98e-04
## 482    -2.59e-02 -3.81e-03 -2.15e-02   2.50e-02   2.66e-02 -2.96e-02  -2.03e-02
## 483    -7.69e-04   9.90e-02 -7.05e-02   1.81e-02   9.23e-02 -1.05e-01  -9.12e-02
## 484     3.22e-02   2.52e-02   1.37e-02   2.46e-02 -3.89e-02 -2.77e-02   4.07e-02
## 485     2.18e-04   1.11e-02   3.94e-04   1.12e-02   2.05e-03   8.37e-03  -3.94e-03
## 486    -2.91e-03 -3.11e-02   5.79e-04   1.90e-02   4.22e-03 -4.82e-03   2.28e-03
## 487    -2.14e-02 -9.82e-04 -7.94e-03 -9.04e-03   4.08e-02 -7.46e-03  -3.63e-02
## 488     2.37e-02   2.01e-02 -1.99e-02   1.98e-02   6.87e-03   1.25e-02  -8.02e-03
## 489     3.11e-04   1.43e-05   2.51e-04   1.35e-04   4.45e-04   3.76e-04  -5.16e-04
## 490    -6.80e-04 -3.15e-02   1.35e-02   1.92e-02   1.08e-02 -2.17e-02  -2.73e-02
## 491     2.91e-02   2.41e-02   2.89e-02 -1.12e-02   1.11e-02   3.81e-02  -1.86e-03
## 492     1.28e-03 -2.30e-02 -6.27e-03 -2.86e-03 -2.54e-03 -3.71e-03   1.37e-03
## 493    -4.01e-03   8.91e-04   6.54e-03   5.56e-03 -8.27e-04   8.12e-03  -3.05e-03
## 494     2.27e-02   1.85e-02   1.35e-02   1.74e-02 -3.19e-03 -2.64e-03   2.60e-03
## 495    -5.03e-03 -3.62e-02   3.50e-02 -9.02e-03   1.63e-02 -4.78e-03  -6.31e-03
## 496    -9.20e-04   1.14e-01   5.60e-02   1.68e-02 -4.82e-02 -1.05e-01   3.24e-02
## 497     2.88e-02   2.39e-02   1.99e-02 -9.76e-03   2.33e-02 -4.57e-03  -2.26e-02
## 498     1.18e-03 -1.74e-04 -1.79e-03   5.49e-04   4.32e-04   1.41e-03   8.33e-04
```

```
## 499   -1.79e-02 -4.18e-03 -1.38e-03 -6.94e-03  5.41e-03 -5.07e-03 -3.83e-03
## 500   -2.32e-04 -7.01e-03  5.84e-03 -1.67e-03  1.47e-03 -8.51e-04 -3.09e-03
## 501   -2.13e-02 -4.84e-04 -2.86e-02 -5.63e-03 -5.95e-03 -2.75e-02 -3.73e-03
## 502   -4.05e-03 -2.61e-02 -4.98e-03 -6.40e-03 -6.24e-04 -3.64e-03 -2.85e-04
## 503    7.70e-03  5.82e-03  8.51e-03 -2.50e-03  9.63e-03  7.85e-03 -7.45e-03
## 504   -2.88e-03 -2.07e-05  4.05e-03 -9.19e-04  2.95e-03 -3.88e-03 -6.40e-04
## 505    4.34e-02 -1.43e-03  7.47e-02  1.11e-02  7.46e-02 -8.06e-02 -5.37e-02
## 506   -2.15e-02 -1.88e-03 -5.39e-03 -7.15e-03  7.24e-03 -2.31e-02 -5.19e-03
## 507    8.59e-04  7.19e-05 -1.23e-03  3.57e-04  8.78e-04  2.23e-04 -2.94e-04
## 508   -1.15e-02 -6.14e-04  2.70e-03 -4.35e-03 -9.22e-03 -2.08e-03  6.23e-03
## 509    3.07e-02  2.25e-02 -2.12e-02  4.96e-02  1.25e-02 -2.57e-02  1.60e-04
## 510    1.16e-04 -2.58e-03  2.67e-03 -6.63e-04  1.97e-03 -1.51e-03 -1.66e-03
## 511   -2.59e-03  5.75e-04 -4.40e-03 -1.82e-03  1.35e-04  2.50e-03 -1.34e-03
## 512   -1.71e-03 -4.64e-02  2.87e-02  3.04e-02  4.66e-02  1.90e-02 -4.73e-02
## 513    2.99e-02  2.43e-02  1.32e-02  2.26e-02  1.96e-03 -2.58e-02  6.48e-03
## 514   -5.15e-02 -4.85e-02 -7.23e-02  2.25e-02  3.01e-02  3.73e-03 -3.41e-02
## 515   -4.42e-02 -3.68e-02  2.53e-03  1.07e-02 -3.76e-02 -4.94e-02  2.04e-02
## 516   -8.36e-03 -2.69e-04  8.17e-03  5.90e-03 -3.16e-03 -3.53e-04  3.68e-03
## 517   -1.33e-02 -1.45e-03  8.58e-03 -2.26e-02  6.53e-03  1.88e-02 -2.89e-03
## 518   -1.01e-03 -9.91e-05  4.23e-04 -1.80e-03 -1.25e-03  6.44e-04  8.58e-04
## 519    5.85e-03  4.66e-03  3.21e-03  4.36e-03 -6.18e-03 -4.86e-03  5.90e-03
## 520   -3.51e-03 -2.42e-02 -9.18e-03  3.27e-02  1.20e-02 -1.55e-02 -3.88e-03
## 521   -7.46e-04  8.61e-05  7.42e-04 -1.64e-03  1.10e-03  5.77e-04 -1.18e-03
## 522   -5.55e-04 -1.25e-02 -3.69e-03 -1.39e-02 -9.57e-03 -8.38e-03  7.39e-03
## 523    5.93e-03  4.63e-03 -2.58e-03 -7.17e-03  6.61e-03 -4.73e-03 -6.92e-03
## 524   -6.14e-03  2.56e-03 -9.37e-04 -1.62e-02  1.82e-02 -2.93e-03 -4.39e-03
## 525    1.69e-02  1.36e-02  9.29e-03  1.21e-02 -1.69e-02  8.43e-03  9.13e-03
## 526   -6.95e-02 -5.60e-02  1.44e-03  2.96e-02  8.53e-02  1.12e-02 -6.56e-02
## 527    1.71e-02  1.39e-02 -1.28e-02  1.21e-02 -7.02e-03 -6.09e-03  2.14e-02
## 528    1.92e-03  1.66e-03  5.42e-04 -4.98e-04 -5.13e-04 -1.62e-03  4.67e-04
## 529    5.46e-02 -1.48e-03 -4.92e-02  1.80e-02 -3.88e-02  1.01e-02  1.23e-02
## 530    7.57e-05  6.23e-05  8.42e-05 -9.21e-05  4.96e-05 -5.55e-05 -6.17e-05
## 531   -1.51e-03 -1.73e-05 -1.78e-04 -4.00e-04 -3.36e-03  2.17e-03  2.52e-03
## 532    7.01e-03  5.42e-03  5.46e-03 -2.20e-03  1.98e-04 -5.50e-03 -4.32e-03
## 533    9.91e-03  8.52e-03  8.81e-03 -1.97e-03 -9.34e-04  1.06e-02  6.27e-03
## 534   -1.56e-02  1.41e-03  1.30e-02  1.75e-02  3.66e-03  2.77e-02 -4.25e-03
## 535    1.15e-02 -1.29e-03 -6.19e-03  2.44e-02 -1.92e-04  5.18e-03 -2.46e-03
## 536    8.92e-04 -1.46e-02 -5.10e-03  6.75e-03 -5.61e-03 -1.07e-02 -3.69e-03
## 537    3.88e-02  2.95e-02 -1.21e-02 -2.85e-03 -1.16e-02  3.35e-02  8.85e-03
## 538   -1.80e-03 -1.53e-02  1.36e-02 -3.75e-03 -1.23e-02  1.53e-02  5.21e-03
## 539    1.01e-02 -1.54e-04 -1.58e-03 -8.97e-03  4.61e-03  2.61e-03  7.31e-03
## 540   -3.69e-03 -1.19e-04  3.29e-03 -1.30e-03  5.82e-03  2.72e-03 -5.83e-03
## 541   -4.13e-02 -3.41e-02  3.66e-03 -8.61e-02 -1.59e-02 -2.31e-02 -7.09e-03
## 542    1.09e-03 -3.03e-04 -4.56e-04  2.42e-03 -5.47e-04 -2.08e-03  1.69e-03
## 543    2.99e-02  2.61e-02 -2.29e-02 -1.26e-02 -5.52e-02 -7.12e-03  4.09e-02
## 544    3.54e-02  3.17e-02  2.54e-02  6.41e-02  4.74e-02 -3.90e-03 -3.51e-02
## 545   -5.24e-03 -3.29e-02  1.19e-02 -1.01e-02 -9.23e-03 -6.91e-03  1.05e-02
## 546    3.65e-04 -8.80e-03 -8.86e-03 -1.62e-03 -2.65e-03 -6.90e-03  2.57e-03
## 547    2.53e-02  2.06e-02 -2.84e-02 -5.80e-03  4.33e-03 -5.57e-03 -6.43e-03
## 548   -2.88e-03  8.65e-02 -3.15e-02  9.39e-02 -4.98e-02  1.25e-02  3.21e-02
```

```
## 549   -9.92e-03 -9.17e-04   8.05e-03   1.05e-02   3.03e-03 -1.03e-02 -6.96e-03
## 550    2.55e-02   2.03e-02 -2.73e-02 -7.09e-03 -3.97e-03 -7.38e-03   3.19e-03
## 551   -1.89e-02 -2.80e-03   2.66e-02 -7.37e-03   7.63e-03   2.57e-02 -1.95e-03
## 552   -4.41e-03 -3.04e-04   5.09e-03 -7.77e-03   3.62e-04   2.65e-03 -1.47e-04
## 553    7.25e-03 -2.19e-03   7.92e-03   3.50e-03   2.26e-02   1.17e-02 -2.66e-02
## 554    3.84e-02   3.05e-02 -3.37e-02   2.91e-02   5.33e-03 -3.16e-02 -9.30e-04
## 555    2.50e-02   2.13e-02   9.07e-03   2.03e-02   3.76e-03   3.16e-02 -9.73e-03
## 556   -5.76e-05 -1.08e-02 -5.24e-03 -1.72e-03   1.07e-03   3.38e-03 -9.56e-04
## 557    1.24e-03   9.93e-04 -1.08e-03 -3.49e-04 -1.85e-03 -1.21e-03   2.69e-03
## 558    7.86e-04   5.47e-03 -1.04e-03   1.83e-03   1.74e-03 -5.57e-03 -3.97e-03
## 559   -1.46e-02 -1.61e-03 -1.06e-02 -4.84e-03 -5.33e-03 -1.82e-02   5.67e-03
## 560   -2.45e-02 -1.83e-03 -2.98e-02 -7.21e-03   1.33e-02 -8.27e-03 -9.26e-03
## 561   -3.02e-03 -2.77e-02   2.79e-02 -6.88e-03 -1.41e-02   2.47e-02   1.13e-02
## 562    7.85e-03 -6.67e-04 -1.45e-02 -6.77e-03 -1.42e-02 -1.16e-02   1.10e-02
## 563   -7.62e-02 -6.18e-02   4.12e-03   2.45e-02 -4.94e-02   6.93e-02   1.42e-02
## 564    2.08e-02   1.61e-02   2.41e-02 -8.30e-03 -2.06e-03 -1.50e-02 -4.24e-03
## 565    3.35e-02   2.61e-02   2.01e-02   5.19e-02   3.64e-03 -2.05e-04 -6.29e-03
## 566    2.48e-02   1.86e-02 -1.11e-02 -3.73e-02   1.63e-02 -6.76e-03 -1.84e-02
## 567   -7.39e-02 -6.13e-02   1.91e-02   7.82e-02 -9.23e-03   7.11e-03   2.57e-02
## 568    2.43e-03   1.88e-03   9.17e-05 -9.90e-04 -3.69e-04 -2.12e-03 -3.95e-04
## 569    5.39e-02 -1.72e-02   3.85e-02   1.88e-02   2.10e-02 -1.08e-01   7.56e-02
## 570    1.77e-02   1.73e-02 -6.02e-03   1.32e-02 -2.48e-02   2.10e-02   1.74e-02
## 571    5.88e-03 -1.24e-03 -9.43e-03   3.46e-03 -1.35e-02   7.34e-03   1.29e-02
## 572   -8.83e-03 -5.35e-02 -1.07e-02   6.58e-02   4.15e-02 -3.20e-02 -3.78e-02
## 573   -1.34e-02 -3.04e-05   1.23e-03 -6.23e-03 -1.62e-02 -3.09e-03   1.99e-02
## 574   -7.06e-02 -6.13e-02 -7.31e-02 -5.23e-02   4.90e-02 -9.83e-02 -3.10e-02
## 575    9.87e-03   7.71e-03 -2.48e-03 -1.55e-02   8.76e-03 -1.06e-02 -4.17e-03
## 576    4.26e-03 -2.67e-02 -2.36e-02 -2.39e-03 -7.49e-03   2.60e-02   4.25e-03
## 577   -1.13e-02 -1.45e-03 -1.06e-02 -4.29e-03 -1.52e-02 -1.12e-02   1.23e-02
## 578    1.00e-03 -4.50e-02 -1.95e-02 -8.05e-03   1.68e-02   4.08e-02 -9.58e-03
## 579    4.45e-02   4.06e-02 -1.17e-02 -6.12e-02   9.17e-03   5.19e-02   7.01e-03
## 580    3.14e-02   2.48e-02 -2.24e-02   2.40e-02   3.89e-02   3.50e-02 -3.54e-02
## 581   -1.15e-02 -1.77e-03 -2.54e-03 -3.97e-03   3.63e-03 -1.37e-02 -3.08e-03
## 582   -1.22e-02 -2.57e-03   1.30e-02   2.42e-02   1.27e-02 -1.74e-03 -9.46e-03
## 583   -2.10e-04   3.38e-06   3.15e-04 -3.97e-04 -2.84e-04   1.88e-04   2.60e-04
## 584   -7.67e-03   2.99e-04 -1.08e-02 -2.32e-03 -2.25e-03   1.36e-02 -1.69e-03
## 585    6.24e-04 -1.45e-02 -2.20e-03 -5.49e-03 -7.90e-03 -1.06e-02 -6.68e-04
## 586    5.44e-02   1.42e-03 -1.70e-02   9.62e-02   3.02e-02 -8.78e-02 -2.99e-02
## 587   -3.17e-03 -2.02e-02   3.60e-03   1.13e-02   5.61e-03   8.99e-03 -5.87e-03
## 588    4.67e-03 -7.93e-04   4.99e-03   1.02e-03   1.28e-02   1.62e-03 -1.31e-02
## 589    9.43e-03 -4.60e-04 -1.75e-03   3.98e-03 -1.77e-02   4.41e-03   2.00e-02
## 590    4.64e-02   4.17e-03 -6.56e-02 -4.09e-02   6.51e-05 -6.95e-02   4.43e-04
## 591    4.49e-03   3.30e-04 -3.58e-03   2.11e-03 -3.07e-03   1.49e-03   5.06e-03
## 592   -6.76e-02 -5.31e-02   4.46e-04   2.24e-02   4.13e-02 -7.92e-02 -2.38e-02
## 593   -7.56e-03   2.81e-03   1.68e-02 -8.83e-03   1.18e-02 -8.62e-03 -1.33e-02
## 594    5.86e-04   3.31e-06 -9.34e-04   2.22e-04   3.49e-04 -4.52e-04 -3.95e-04
## 595    3.12e-03 -3.36e-05   2.21e-03   6.46e-03 -3.48e-03   1.28e-03   1.16e-03
## 596   -1.09e-01 -9.36e-02 -1.05e-01   5.36e-02 -2.61e-02 -5.24e-02   2.81e-03
## 597    6.76e-03   5.73e-03   6.42e-03 -9.06e-03   2.68e-03 -1.02e-03 -7.24e-04
## 598   -1.36e-02   1.99e-05   1.38e-02   1.44e-02 -3.50e-03 -1.38e-02   1.01e-03
```

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## 599   -7.86e-02 -6.26e-02 -5.90e-02  3.15e-02 -8.87e-02  1.05e-02  8.49e-02
## 600   -8.12e-03 -2.96e-04  1.35e-02 -2.46e-03  3.87e-03  5.56e-03  4.01e-04
## 601   -9.83e-04 -3.03e-06 -1.97e-03  1.33e-03  1.84e-04 -4.78e-04  2.25e-04
## 602    4.24e-02  3.59e-02  2.51e-02  3.31e-02 -2.40e-02 -2.66e-03  2.34e-02
## 603    3.78e-02  3.18e-02  1.54e-02  2.73e-02  2.98e-03 -3.26e-02 -3.30e-03
## 604    3.06e-02  2.28e-02 -3.19e-02  2.33e-02  3.74e-04 -6.50e-03 -3.22e-03
## 605   -8.01e-03  1.44e-03 -1.87e-02 -1.26e-03 -1.29e-02  6.54e-03  1.32e-02
## 606   -3.60e-03 -4.98e-02  3.39e-02  3.09e-02  3.72e-03  4.90e-02  1.29e-05
## 607    3.10e-02  2.48e-02 -4.52e-02  2.56e-02  1.52e-02 -3.00e-02 -9.02e-03
## 608    5.88e-02 -8.99e-03 -9.27e-02  2.37e-02  1.79e-01  9.65e-02 -1.25e-01
## 609   -1.16e-01 -8.73e-02 -9.46e-02  3.55e-02  3.94e-02  7.22e-02 -5.32e-02
## 610   -6.75e-03  2.22e-04 -1.03e-02 -3.90e-03  7.22e-03  1.26e-02 -1.44e-02
## 611   -1.84e-03 -1.93e-02  1.03e-02  1.09e-02  1.17e-02 -1.24e-02 -2.33e-02
## 612    1.62e-03  1.32e-03  2.88e-04 -5.56e-04 -3.24e-04 -3.17e-04  7.49e-05
## 613   -2.45e-02 -1.79e-03 -2.05e-02 -1.03e-02 -3.22e-02  1.64e-02  3.11e-02
## 614   -4.21e-03 -3.58e-04 -4.93e-03 -1.37e-03  4.20e-03 -5.42e-03 -4.33e-03
## 615    6.08e-02  5.35e-03  6.20e-02 -6.05e-02 -2.90e-02  1.44e-02  4.70e-03
## 616   -1.61e-03 -8.45e-05  7.83e-04 -7.26e-04 -2.79e-04 -1.34e-03  2.17e-04
## 617    2.62e-03 -6.88e-04 -9.41e-04  3.99e-04 -4.95e-03  1.61e-03  5.80e-03
## 618    1.78e-02  1.50e-02  9.97e-03 -5.14e-03 -3.03e-03  9.05e-03  1.88e-03
## 619    3.39e-02  2.80e-02  6.75e-03 -5.22e-02  2.36e-02  4.17e-02 -1.73e-02
## 620   -3.46e-05  2.10e-03 -1.29e-03  2.17e-03  1.78e-03 -2.04e-03 -1.81e-03
## 621    5.13e-02  4.18e-02  2.77e-02  3.49e-02  2.15e-02  5.74e-02 -1.20e-02
## 622   -7.03e-03  8.04e-04  3.64e-03 -2.56e-03  3.47e-03 -9.16e-03  1.81e-03
## 623   -1.30e-03 -1.22e-02 -2.93e-03 -2.55e-03 -8.27e-03 -8.69e-03  7.91e-03
## 624   -2.72e-03 -2.62e-02 -7.70e-03  1.68e-02  2.19e-02 -1.76e-02 -1.43e-02
## 625   -1.60e-02 -8.38e-04 -8.36e-03  1.68e-02  1.14e-02 -2.08e-02  6.34e-03
## 626    2.00e-03 -1.95e-02 -4.11e-03 -3.73e-03  2.36e-04  2.07e-02 -3.11e-03
## 627   -8.31e-04 -1.77e-05 -1.03e-03 -1.49e-03 -7.31e-04 -3.48e-04  6.79e-04
## 628   -1.78e-03  3.09e-04 -1.92e-03  2.28e-03 -1.04e-03 -2.51e-03  1.53e-03
## 629   -1.07e-03 -1.34e-02 -7.12e-04  7.24e-03 -4.01e-04 -2.44e-03 -7.02e-04
## 630   -1.30e-03 -1.54e-02  1.45e-03  9.37e-03  1.74e-02 -1.07e-02 -1.60e-02
## 631   -9.68e-03 -1.58e-03  1.12e-02  7.88e-03 -1.20e-02 -7.87e-03  8.51e-03
## 632   -1.40e-02  5.74e-04  6.61e-03 -3.04e-02  1.18e-02 -1.88e-02 -2.43e-03
## 633    4.63e-02  4.11e-02  5.31e-02 -1.42e-02  2.18e-02 -3.25e-02 -6.93e-03
## 634   -1.54e-02 -3.05e-05 -5.47e-03  2.21e-02  4.73e-03  3.03e-02  1.05e-03
## 635   -3.03e-02 -3.68e-03 -4.22e-02 -1.04e-02 -4.64e-02  3.86e-02  3.90e-02
## 636   -4.74e-03 -4.78e-05 -1.10e-03  6.13e-03  1.23e-03 -1.69e-03 -2.68e-03
## 637    7.81e-03  8.01e-02  6.75e-02  1.53e-02 -2.33e-02 -2.00e-02 -3.77e-03
## 638    2.35e-03  1.11e-02 -4.81e-04  3.76e-03 -2.82e-03  7.96e-03  1.23e-03
## 639   -1.64e-02 -2.33e-03 -1.43e-02  1.47e-02 -2.17e-02  1.99e-02  1.87e-02
## 640   -3.76e-03  7.42e-04  9.07e-03 -1.20e-03  5.95e-03  8.70e-03 -4.50e-03
## 641   -1.51e-02 -8.35e-04  1.19e-02  1.09e-02  1.09e-02 -1.29e-02 -6.72e-03
## 642   -1.85e-02 -1.25e-03  1.65e-02 -9.08e-03  3.57e-03  1.39e-02 -3.47e-03
## 643   -1.57e-02 -2.56e-03 -2.47e-02  1.91e-02  7.90e-03  8.95e-03 -7.92e-03
## 644   -6.23e-03  1.00e-03 -1.03e-02 -1.22e-02 -4.11e-03 -9.31e-03  8.13e-03
## 645   -1.45e-02 -3.82e-04  1.23e-02 -6.23e-03  6.94e-03 -1.49e-02  8.91e-04
## 646    1.44e-02  9.72e-02 -4.27e-02 -4.94e-02 -2.72e-02  1.07e-02  1.42e-02
## 647    1.75e-03 -2.62e-05  6.26e-04  5.89e-04  3.88e-03  2.50e-03 -4.14e-03
## 648   -3.47e-03  6.67e-05 -2.58e-03  4.64e-03  1.22e-03  2.33e-03 -2.61e-03
```

```
## 649   -1.05e-02   2.00e-04   7.63e-03  -4.36e-03   1.26e-02  -1.16e-02  -5.58e-03
## 650   -1.03e-02  -8.09e-03   3.10e-03   3.11e-03  -9.02e-04   9.26e-03  -1.07e-03
## 651   -5.92e-03  -4.88e-04   7.64e-03  -2.32e-03  -1.63e-03  -5.30e-03   2.42e-03
## 652   -1.13e-02  -1.25e-03   1.67e-02  -4.72e-03  -1.35e-02  -1.32e-02   1.25e-02
## 653    3.77e-02   4.09e-02   5.17e-02  -1.42e-02  -5.68e-02   2.75e-02   3.97e-02
## 654    1.98e-03  -1.04e-02  -1.12e-02  -6.42e-03   1.65e-02   1.18e-02  -1.49e-02
## 655    5.20e-03   3.20e-05  -5.48e-03  -5.74e-03   2.44e-03   5.58e-03  -3.99e-03
## 656   -1.48e-03  -2.37e-02   7.12e-03  -4.40e-03   6.70e-03   9.01e-03   1.78e-04
## 657   -4.91e-02  -3.57e-02   3.58e-02   1.55e-02  -9.49e-03   3.82e-02   1.87e-02
## 658   -1.45e-03  -1.86e-02   2.08e-03   1.14e-02   6.21e-03  -1.25e-02  -7.27e-04
## 659   -2.44e-02   3.51e-03   1.68e-02  -1.33e-02   1.97e-02   5.63e-02  -7.02e-04
## 660    2.12e-02   1.68e-02  -2.67e-02  -6.43e-03  -2.03e-02  -1.93e-02   1.35e-02
## 661   -3.44e-03   8.94e-02  -2.01e-02  -6.87e-02  -1.95e-02   5.51e-02   2.19e-02
## 662   -1.37e-04  -1.80e-02   6.56e-03  -4.16e-03  -1.29e-02   6.91e-03   8.78e-03
## 663   -5.67e-02  -4.87e-02  -3.74e-02  -4.97e-02   3.31e-03   1.04e-02  -5.28e-03
## 664   -8.12e-02  -6.56e-02   2.96e-03   3.00e-02  -1.81e-02   6.72e-02   2.62e-02
## 665   -9.27e-03   1.00e-03  -1.14e-03  -2.89e-03   6.55e-03  -1.28e-02  -1.28e-03
## 666    4.02e-02   3.24e-02  -1.39e-03   2.87e-02   1.92e-02  -2.45e-02  -2.19e-02
## 667    7.21e-02   1.19e-02  -8.63e-02   3.01e-02   9.69e-02   6.96e-03  -8.18e-02
## 668   -3.17e-03   8.40e-02  -1.98e-02  -1.30e-01  -4.04e-02   5.10e-02   5.09e-03
## 669   -4.69e-04  -1.01e-02  -3.16e-03  -1.96e-03   1.95e-03  -2.19e-03   4.01e-05
## 670    4.50e-02  -3.65e-03   3.16e-03   1.37e-02  -1.24e-02  -8.63e-02  -6.91e-03
## 671    2.55e-02   1.96e-02  -1.06e-02  -9.97e-03  -4.23e-04  -4.84e-03  -1.17e-03
## 672   -4.20e-04  -2.60e-02  -1.08e-02  -4.81e-03  -1.65e-03   8.20e-03   1.15e-03
## 673    2.05e-02   1.59e-02  -2.38e-03   1.47e-02   4.32e-04  -3.37e-03  -2.08e-03
## 674    5.36e-02   4.66e-02  -6.28e-02   4.43e-02   1.84e-02   6.01e-02  -9.02e-03
## 675    1.04e-03  -2.16e-02   2.28e-02   1.71e-02   3.07e-03   1.07e-02   1.17e-03
## 676   -1.72e-02  -4.11e-03   1.80e-02   1.24e-02   1.11e-02  -4.40e-03   4.63e-03
## 677   -1.17e-02   6.44e-04   8.27e-03  -4.13e-03  -1.77e-02  -1.26e-02   1.83e-02
## 678   -4.06e-03   7.45e-04   4.30e-03  -2.33e-03  -6.27e-03   3.58e-03   1.16e-02
## 679   -3.52e-03   3.66e-04   4.09e-03  -1.08e-03   2.81e-03  -9.04e-04   8.24e-04
## 680    6.50e-04  -2.09e-04  -7.89e-04   4.52e-04  -4.00e-04  -1.18e-05   4.76e-04
## 681    1.98e-02   1.49e-02   9.27e-04  -9.14e-03   2.91e-02  -1.81e-02  -2.41e-02
## 682    5.39e-03  -1.92e-03   5.19e-03   1.46e-03  -1.55e-02  -1.27e-02   2.13e-02
## 683   -7.79e-03   9.73e-05  -1.25e-03   6.32e-03   1.74e-03   5.06e-03   1.74e-04
## 684    4.77e-02   6.62e-03  -6.50e-02  -3.97e-02  -6.63e-03  -3.43e-02   8.10e-03
## 685    6.92e-05  -3.00e-02   3.51e-04   2.01e-02  -1.91e-02   1.20e-02   6.61e-03
## 686    2.79e-02   2.65e-02   1.35e-02   2.59e-02  -2.86e-02   4.00e-02   2.42e-02
## 687    2.08e-02   1.81e-02   6.69e-03  -3.48e-03   4.41e-02   2.13e-02  -2.64e-02
## 688    4.75e-03   3.72e-03  -2.37e-03  -1.22e-03   3.42e-03  -1.28e-03   3.16e-04
## 689   -3.48e-02  -3.11e-02  -4.75e-02  -2.78e-02  -4.20e-03  -2.60e-02   3.41e-03
## 690   -5.32e-02  -4.08e-02   3.69e-02   2.57e-02  -1.30e-02  -6.98e-02   1.88e-02
## 691   -2.29e-02  -9.98e-04   2.49e-02  -1.04e-02  -5.86e-03  -2.54e-02   6.35e-03
## 692    9.18e-04  -4.02e-02   4.36e-02  -7.78e-03   3.02e-02   2.41e-02  -3.19e-02
## 693   -7.98e-03  -3.48e-04  -1.14e-02  -3.48e-03   9.12e-04   1.26e-02  -2.28e-03
## 694    7.00e-02   2.60e-03  -3.77e-02  -5.99e-02   1.28e-02   7.13e-02  -1.96e-03
## 695    1.99e-02   1.65e-02   1.76e-02   1.56e-02   3.05e-03  -1.71e-02  -9.92e-03
## 696    6.21e-02   9.43e-03  -5.51e-02  -5.16e-02   1.33e-02   1.56e-02  -5.89e-03
## 697    6.92e-03  -2.01e-03  -3.67e-03   2.23e-03   7.22e-03  -5.92e-03  -6.89e-03
## 698   -1.31e-02  -6.66e-04  -1.12e-02  -3.53e-03   2.98e-03  -1.49e-02  -1.92e-03
```

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## 699   -6.24e-03   3.40e-04 -7.07e-03 -2.58e-03 -1.01e-02 -1.76e-03   8.02e-03
## 700    1.07e-02 -2.28e-03   4.91e-03   4.04e-03 -2.07e-02   2.14e-02   2.90e-02
## 701   -1.11e-01 -8.28e-02 -5.55e-02   3.35e-02 -3.62e-02   1.17e-02   1.42e-02
## 702   -2.77e-03   6.73e-03 -4.83e-03   2.72e-03   8.72e-04   7.61e-04   8.09e-04
## 703   -2.78e-04 -2.39e-03 -1.79e-05 -5.37e-04 -2.96e-03 -6.07e-04   2.42e-03
## 704    2.59e-02   2.53e-02 -2.34e-02 -1.22e-02 -9.20e-03 -2.33e-02   2.01e-03
## 705   -7.62e-04   2.95e-02   2.88e-02   3.63e-03   3.47e-02   2.44e-02 -2.68e-02
## 706    1.74e-03   1.43e-03   1.39e-03 -2.01e-03 -2.30e-03 -9.60e-05   1.48e-03
## 707   -8.84e-02 -8.78e-02   9.07e-02   1.07e-01   8.20e-02 -4.00e-02 -5.03e-02
## 708    1.75e-03 -1.04e-02   1.35e-03 -1.36e-02   6.30e-05 -8.85e-04   7.00e-03
## 709   -2.81e-04   1.45e-02   9.42e-03   2.93e-03   4.58e-03   1.22e-02 -6.56e-03
## 710   -4.62e-02 -4.60e-02 -3.86e-02 -2.99e-02 -1.27e-02 -7.32e-02   6.16e-03
## 711    1.18e-02   1.08e-02   9.33e-03 -6.37e-03   7.81e-03   1.33e-06 -2.03e-02
## 712   -4.92e-02 -4.06e-02   4.93e-02 -3.83e-02 -2.07e-03 -6.01e-02   1.56e-03
## 713    2.10e-02   1.59e-02   1.04e-02 -8.20e-03   1.76e-02 -1.85e-02 -1.52e-02
## 714   -7.57e-04   1.46e-02   1.16e-02   2.25e-03 -4.05e-03   1.17e-02 -4.47e-04
## 715   -2.68e-03   2.90e-02   1.94e-03   7.11e-03 -2.91e-02   2.41e-02   3.04e-02
## 716   -2.10e-02   2.30e-03 -1.92e-02 -3.88e-02 -1.71e-02   1.62e-02   9.77e-03
## 717   -3.65e-03   1.73e-02 -1.52e-04   3.24e-03   1.74e-03   1.94e-03   1.63e-02
## 718   -1.45e-02 -1.29e-03   2.26e-02 -5.21e-03   9.03e-03   9.89e-03 -6.51e-03
## 719   -1.13e-02   2.83e-03   1.49e-02 -4.50e-03 -1.48e-02   2.06e-02   1.52e-02
## 720    2.00e-02   1.74e-02 -1.45e-02 -4.59e-03 -1.95e-02 -1.69e-02   1.89e-02
## 721    5.00e-02   7.03e-03 -4.68e-02   2.13e-02 -1.66e-02   9.94e-03 -5.89e-03
## 722   -1.63e-03   9.71e-04 -4.54e-03 -8.15e-04 -2.14e-03 -8.01e-04   3.99e-04
## 723   -1.21e-02   4.41e-04   1.12e-03 -2.96e-03   6.06e-03 -1.62e-03 -6.58e-03
## 724   -2.17e-03   2.21e-02   7.44e-03   2.84e-03 -1.34e-03   5.52e-03   1.07e-02
## 725   -1.88e-03 -1.91e-02   1.17e-02   1.07e-02 -1.45e-02 -2.07e-03   1.22e-02
## 726    2.37e-03   7.98e-02 -6.43e-02 -4.68e-02 -5.12e-02 -3.95e-02   4.88e-02
## 727   -1.47e-02   3.09e-05 -2.06e-02 -3.15e-03 -2.36e-02   2.18e-02   1.79e-02
## 728    1.56e-02   1.59e-02 -9.13e-03 -1.19e-02 -1.15e-02 -1.88e-02   1.17e-02
## 729    7.20e-03 -2.96e-03 -7.59e-03   1.27e-03 -5.68e-03   3.12e-03   4.65e-03
## 730    6.57e-03 -4.48e-02   1.18e-02 -1.86e-02 -4.72e-03 -4.79e-03   1.20e-03
## 731   -1.88e-02   1.16e-03 -4.40e-03 -3.57e-02   6.30e-04   3.13e-02 -2.19e-02
## 732   -4.29e-02 -3.72e-02   5.59e-02 -3.49e-02 -3.26e-03 -5.43e-02   7.28e-03
## 733   -5.57e-02 -4.64e-02 -1.40e-02   2.57e-02 -1.77e-02 -3.55e-02   1.18e-02
## 734    1.04e-02   1.82e-05 -1.61e-02   1.91e-02   5.33e-03   1.08e-02 -5.01e-03
## 735   -3.92e-02 -8.92e-03 -4.38e-02   7.93e-02   4.17e-03   4.83e-02   1.98e-03
## 736    2.73e-02   2.12e-02 -3.19e-02   2.19e-02 -2.07e-02 -8.88e-03   3.67e-02
## 737    1.77e-03   1.44e-03 -7.14e-04   1.18e-03   7.62e-04 -3.05e-04 -1.88e-04
## 738    1.36e-02   1.12e-02   1.10e-02 -4.89e-03 -8.75e-03 -1.84e-03   7.46e-03
## 739    5.55e-04   6.86e-05   1.41e-04 -4.10e-04   8.32e-04   6.44e-04 -6.93e-04
## 740   -8.67e-03 -1.23e-03   7.16e-03 -3.41e-03 -1.37e-02 -8.60e-03   1.13e-02
## 741    6.67e-05 -1.19e-02   7.31e-03 -2.61e-03   8.35e-03 -7.53e-03 -8.78e-03
## 742    9.39e-03   4.38e-04   1.23e-02   4.06e-03   1.28e-02   4.42e-03 -6.16e-04
## 743   -5.73e-03 -2.74e-04   1.94e-03 -2.08e-03   2.99e-03 -7.87e-03   2.06e-04
## 744    2.67e-02   2.26e-02 -6.10e-03   1.83e-02 -1.30e-02 -2.19e-02   1.49e-02
## 745    5.38e-02   4.08e-03 -1.83e-02 -1.31e-01   5.26e-02 -3.90e-02 -7.43e-02
## 746   -2.18e-02   1.49e-03   7.63e-03 -6.58e-03   1.62e-02   1.62e-02 -5.55e-03
## 747   -1.30e-03   1.30e-02 -2.13e-03 -1.98e-02 -1.22e-03   7.27e-04   1.37e-02
## 748    3.37e-02   3.05e-02   3.22e-02 -1.41e-02   1.57e-02 -3.01e-02   1.40e-03
```

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## 749   -4.99e-02 -4.60e-02  3.10e-02 -9.73e-02  3.78e-02 -7.02e-02 -2.87e-02
## 750    6.39e-02 -7.67e-03 -2.71e-02 -1.78e-01 -3.55e-02  8.48e-02  5.56e-02
## 751   -7.32e-04  2.82e-04  7.15e-04 -2.17e-03 -1.14e-03 -1.60e-03  6.40e-04
## 752    2.30e-02 -2.99e-03  3.19e-02  7.74e-03 -1.72e-02  1.00e-02  2.89e-03
## 753   -1.05e-01 -7.69e-02 -8.39e-02  1.20e-01 -1.02e-01 -9.36e-02  1.43e-02
## 754    4.92e-02  4.68e-02 -2.50e-02 -1.68e-02  1.76e-02  5.72e-02 -1.50e-02
## 755    2.25e-02  2.00e-02 -2.11e-02  1.54e-02  3.65e-03 -1.83e-02 -3.09e-03
## 756    9.98e-03 -1.65e-03  1.50e-02  5.70e-03 -2.01e-02  1.70e-02  2.53e-02
## 757    1.57e-02  1.40e-02 -1.73e-03 -5.41e-03  2.20e-02 -3.52e-03 -1.63e-02
## 758    1.26e-03  1.04e-02  2.19e-03  1.08e-02 -1.42e-02  8.39e-03  1.32e-02
## 759   -5.61e-03  2.76e-03  7.90e-04 -1.54e-03  4.56e-03 -9.96e-03 -1.18e-02
## 760    3.16e-02  2.47e-02  3.55e-02 -7.33e-03  1.15e-02  1.66e-02 -5.50e-03
## 761   -6.43e-03 -5.60e-04  7.00e-03  5.87e-03 -5.92e-03  3.12e-03  1.17e-02
## 762    9.83e-04  1.11e-01  4.35e-02  2.06e-02  7.14e-02  2.17e-02 -6.82e-02
## 763    4.56e-02  6.04e-03 -2.12e-02  1.53e-02 -3.03e-03 -5.92e-02 -1.02e-02
## 764   -1.92e-02  7.23e-04 -2.16e-02 -6.34e-03 -2.06e-03 -4.61e-03  1.36e-04
## 765   -9.01e-03 -9.02e-04 -3.12e-03 -3.28e-03 -7.05e-03  5.98e-03  7.44e-03
## 766   -1.09e-02 -5.62e-04  1.20e-02 -3.48e-03  8.37e-03 -1.59e-03 -3.80e-03
## 767   -1.08e-02  2.53e-03  2.96e-03 -3.74e-03 -6.75e-03 -4.41e-03 -4.30e-03
## 768    1.77e-02  1.54e-02  2.06e-02 -7.88e-03 -2.13e-02  1.16e-02  2.04e-02
## 769   -1.21e-02  4.28e-04 -3.37e-03 -5.06e-03  2.30e-02  2.54e-02 -3.08e-02
## 770   -5.62e-03 -3.90e-02 -9.11e-04  2.31e-02  3.14e-03 -4.61e-03  3.68e-03
## 771    3.64e-04  2.60e-02 -1.63e-02  7.46e-03  5.96e-03  1.92e-02  1.44e-02
## 772   -4.97e-03  9.70e-04  8.99e-03  7.00e-03 -1.67e-03 -5.92e-04 -1.59e-03
## 773   -6.50e-03  9.44e-04  3.53e-03 -1.70e-03  1.16e-02 -1.47e-03 -1.68e-03
## 774    1.45e-02  1.19e-02  4.81e-03  1.00e-02 -1.10e-02 -1.18e-02  8.72e-03
## 775    9.65e-03  9.03e-03  8.36e-03  4.41e-03  9.15e-03  1.08e-02 -8.76e-03
## 776   -2.91e-04 -9.88e-03 -3.97e-03  5.91e-03  7.52e-04 -7.66e-03 -1.85e-03
## 777   -4.60e-02 -4.38e-02 -1.63e-02  2.33e-02 -1.16e-02  4.63e-02  1.21e-02
## 778   -5.31e-02 -4.66e-02 -6.78e-02 -4.23e-02  2.33e-02 -7.86e-02 -2.40e-02
## 779    2.62e-03 -1.55e-02 -4.38e-03  1.24e-02 -5.94e-03  1.82e-02  1.47e-02
## 780    6.07e-02 -1.91e-03 -1.16e-01  1.76e-02 -6.86e-02  1.43e-02 -1.56e-02
## 781   -8.78e-02 -8.67e-02  1.83e-02 -6.50e-02  7.84e-02 -1.05e-01 -3.41e-02
## 782   -2.89e-02 -6.41e-03  1.24e-02  2.36e-02  3.01e-02  3.68e-02 -2.39e-02
## 783   -1.23e-02  1.22e-03 -1.02e-02 -4.85e-03  3.11e-02  2.38e-02 -4.11e-02
## 784    4.10e-03  7.51e-05 -5.95e-03  7.48e-03 -6.37e-03  1.34e-03  3.84e-03
## 785   -2.14e-03 -8.94e-05 -4.87e-05  2.11e-03 -1.84e-03 -5.08e-04  2.26e-03
## 786   -5.01e-03  1.50e-03  2.91e-03 -5.04e-03 -4.31e-03 -1.07e-02  9.79e-04
## 787   -1.87e-02 -4.69e-04 -1.78e-02  4.18e-02  2.77e-02 -3.37e-03 -2.89e-02
## 788    8.20e-04 -1.22e-04 -1.06e-04  2.67e-04 -3.28e-04 -6.44e-04  2.25e-04
## 789    7.14e-03  6.09e-03  1.25e-03 -2.17e-03 -8.05e-03 -1.60e-03  9.14e-03
## 790    5.77e-02 -1.21e-02  7.64e-02 -7.56e-02 -3.22e-03 -1.13e-01 -3.03e-02
## 791    3.01e-04  2.20e-03 -1.55e-03 -1.18e-03  3.10e-03  1.33e-03 -2.45e-03
## 792   -9.18e-02 -7.48e-02  6.32e-02  1.80e-02  6.76e-02 -9.33e-02 -1.58e-02
## 793   -6.49e-02 -5.18e-02 -2.73e-02 -4.75e-02  3.14e-02  4.55e-03 -5.05e-02
## 794   -9.60e-04 -3.10e-02  1.59e-02 -6.75e-03  3.63e-03 -3.85e-03  1.08e-04
## 795    2.76e-02  2.33e-02  2.17e-02 -1.08e-02  1.69e-02 -2.17e-02 -2.81e-02
## 796   -3.07e-03 -3.39e-02 -2.43e-02  1.95e-02  9.86e-04 -2.47e-02 -6.01e-03
## 797    7.33e-02  7.20e-03 -1.09e-01  2.90e-02 -9.51e-02  7.77e-02  6.66e-02
## 798   -1.05e-03  1.04e-01 -9.68e-02  2.30e-02 -9.55e-03  5.08e-03  1.39e-02
```

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## 799   -4.15e-02 -3.18e-02 -1.99e-02 -2.96e-02 -9.31e-03 -2.36e-02  3.37e-03
## 800   -5.84e-03  1.00e-05  1.06e-02 -4.87e-03  1.01e-02  1.05e-02 -1.36e-02
## 801    1.21e-02  9.34e-02 -5.72e-02 -5.43e-02 -1.34e-02 -4.33e-02  1.72e-02
## 802   -7.52e-02 -6.67e-02  4.51e-02  1.56e-02  6.58e-02  4.97e-03 -4.11e-02
## 803   -1.15e-02 -4.39e-04  1.80e-02 -3.98e-03 -1.48e-02  9.18e-03  1.08e-02
## 804   -4.26e-03 -3.09e-04  4.04e-03  2.76e-03  2.75e-03 -3.54e-03 -1.60e-03
## 805   -6.95e-03 -6.44e-03 -6.76e-03  9.37e-03 -4.76e-03  4.12e-03  6.47e-03
## 806    5.08e-03 -1.18e-03 -2.64e-04 -6.53e-03 -9.97e-04  1.34e-03 -1.47e-03
## 807    2.24e-02  1.70e-02 -1.20e-02 -5.56e-03 -3.65e-03  9.03e-03  1.60e-03
## 808    8.90e-04 -2.32e-02 -7.57e-03  1.75e-02 -2.14e-02 -3.72e-03  1.02e-02
## 809   -8.28e-06  1.01e-03  7.71e-04  1.42e-04 -5.20e-04  8.03e-04  1.22e-04
## 810   -6.32e-06  8.88e-03  8.41e-03  1.31e-03  1.25e-02 -3.11e-03 -9.19e-03
## 811    3.82e-03 -2.50e-04 -3.77e-03  1.60e-03 -7.28e-03  1.73e-03  1.07e-02
## 812    1.36e-02  1.20e-02  1.78e-02 -6.82e-03 -2.89e-02  9.05e-03  2.25e-02
## 813   -9.76e-03  3.51e-03 -8.62e-03 -3.93e-03  3.51e-03  2.28e-02 -6.46e-03
## 814    4.49e-03  1.18e-01  7.82e-02  4.10e-02  1.33e-01  8.62e-02 -1.16e-01
## 815    6.13e-03  5.17e-03  3.86e-03  3.51e-03 -5.60e-04 -4.53e-04 -4.74e-03
## 816    4.08e-02  3.65e-02 -1.20e-02  3.51e-02 -1.59e-03  2.37e-02  4.78e-03
## 817    1.34e-02  1.29e-02 -2.14e-03 -5.38e-03  3.23e-03  7.35e-03 -5.73e-03
## 818    2.37e-03  2.12e-03 -1.14e-03 -9.92e-04  2.79e-03 -2.19e-03 -2.05e-03
## 819   -1.07e-02 -8.54e-04  3.46e-05 -1.83e-02  7.43e-03 -1.26e-02 -7.03e-03
## 820   -1.98e-02 -7.92e-04  2.36e-03  2.44e-02  1.38e-02  1.54e-02 -9.58e-03
## 821   -2.66e-04 -4.46e-03  1.25e-03 -9.07e-04 -2.36e-03 -2.91e-03  1.42e-03
## 822    1.95e-03 -7.48e-05 -8.77e-04 -2.19e-03  2.91e-03 -1.52e-03 -1.98e-03
## 823    2.10e-02  1.91e-02 -2.63e-02 -4.97e-03 -2.73e-02 -3.34e-03  2.11e-02
## 824   -2.51e-03 -2.64e-02  3.72e-03 -7.08e-03  1.75e-02  1.08e-02 -1.09e-02
## 825    3.39e-02  2.55e-02  1.11e-02  6.59e-02 -2.66e-02 -3.27e-02  4.28e-02
## 826   -2.65e-02 -1.08e-03 -2.00e-02  2.54e-02 -2.40e-02 -2.78e-02  2.70e-02
## 827   -8.31e-04 -5.20e-05  1.38e-03 -1.77e-03  7.27e-04 -2.06e-04 -2.38e-04
## 828   -1.12e-02 -6.09e-02  4.20e-02  3.40e-02  1.86e-02 -3.16e-03 -1.62e-02
## 829   -6.10e-02 -6.33e-02  5.29e-02  4.31e-02  8.52e-03  1.81e-02 -4.13e-03
## 830   -5.55e-02 -4.49e-02  1.42e-02  1.62e-02 -3.26e-02 -6.26e-02  5.61e-02
## 831   -2.71e-02 -3.24e-03  2.89e-02 -1.12e-02  4.90e-02 -2.99e-02 -4.52e-02
## 832    6.20e-02  4.23e-03  1.55e-02  1.71e-02 -2.59e-02  1.41e-02  3.01e-02
## 833   -1.11e-03 -1.57e-02  5.45e-03  8.84e-03 -1.45e-03 -1.06e-02  1.04e-03
## 834   -1.57e-02 -3.62e-03  5.55e-03  1.14e-02  5.26e-03 -3.98e-03 -2.30e-03
## 835   -4.21e-03  3.92e-04 -7.52e-04 -1.54e-03 -3.70e-03 -7.66e-04  1.71e-03
## 836    2.37e-02  1.80e-02 -2.75e-02 -5.44e-03  2.43e-02 -5.75e-03 -2.39e-02
## 837    7.02e-02  3.65e-03 -6.50e-02 -7.69e-02  1.43e-01 -1.07e-01 -1.09e-01
## 838    1.56e-02  1.31e-02 -1.24e-02 -3.83e-03  2.26e-02 -3.68e-03 -2.67e-02
## 839   -5.85e-02 -5.14e-02 -4.04e-02  1.92e-02  2.74e-02 -6.76e-02 -6.82e-03
## 840    2.03e-02  1.68e-02  1.67e-02 -5.17e-03 -9.20e-03  2.33e-02  8.43e-03
## 841   -4.38e-03 -6.28e-04  1.38e-03  3.97e-03  2.04e-03 -1.28e-03  4.77e-04
## 842    2.67e-02  2.06e-02  1.86e-02 -1.26e-02  2.66e-02  1.45e-02 -2.18e-02
## 843    5.14e-02 -2.09e-03  3.37e-02  1.52e-02 -7.23e-03  6.13e-02  1.24e-02
## 844    4.83e-03  1.83e-04  3.74e-03  9.48e-03 -9.55e-03  7.03e-03  7.78e-03
## 845   -9.18e-03 -1.13e-03 -2.76e-03  8.32e-03  1.00e-03 -2.28e-03 -1.05e-03
## 846   -3.83e-02  1.14e-04 -5.00e-02  4.24e-02 -3.64e-02 -4.17e-02  5.31e-02
## 847   -3.72e-05 -5.56e-03  3.14e-03  3.15e-03 -1.16e-03  2.09e-03  2.61e-04
## 848    2.36e-02  2.00e-02 -3.09e-02  1.92e-02 -6.64e-03  2.77e-02  1.16e-02
```

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## 849   -1.23e-02 -2.14e-03  7.93e-03  1.04e-02  4.07e-03 -1.12e-02 -3.58e-03
## 850   -8.26e-02 -6.44e-02  5.07e-02 -1.39e-01  4.38e-02  7.54e-03 -2.68e-02
## 851   -7.89e-04 -1.04e-02 -2.71e-03 -3.09e-03  3.15e-03  1.07e-02 -3.70e-03
## 852   -1.74e-03  9.63e-03  8.36e-03  2.04e-03  4.19e-04 -8.92e-03  6.00e-03
## 853    3.36e-03  4.86e-05 -2.34e-03  8.56e-04 -4.28e-03  4.12e-03  2.06e-03
## 854    3.14e-02  2.47e-02  1.64e-02 -1.56e-02  2.68e-03  4.39e-02 -5.15e-03
## 855   -1.64e-02  3.54e-03 -1.43e-02 -4.47e-03  3.77e-02 -4.38e-03 -3.45e-02
## 856    6.67e-03  3.09e-04 -2.24e-03 -7.59e-03 -2.88e-03  7.88e-03  1.21e-03
## 857    3.72e-02  2.95e-02 -3.36e-02  3.15e-02  1.33e-02 -9.14e-03 -1.54e-02
## 858   -8.51e-02 -7.01e-02  7.45e-02  1.51e-02 -4.09e-02  1.25e-02  2.87e-02
## 859   -5.97e-03  2.84e-02 -1.32e-02  4.74e-03  1.42e-02  5.98e-03  6.35e-03
## 860   -3.77e-02 -5.45e-03 -7.85e-03  8.73e-02  6.98e-03 -3.75e-02  5.20e-03
## 861    5.85e-02  7.06e-03 -3.48e-02 -4.57e-02 -1.85e-02  4.46e-02  2.20e-02
## 862    2.98e-04 -1.89e-04  5.24e-05  3.77e-04 -9.33e-04 -1.14e-03  1.00e-03
## 863    2.33e-02  2.19e-02 -1.07e-02  4.51e-02  1.09e-02 -4.59e-03 -5.01e-03
## 864   -6.66e-03 -1.10e-03 -1.01e-02 -2.00e-03  6.84e-03 -3.12e-03 -5.88e-03
## 865   -1.85e-03  8.99e-02  7.75e-02 -6.50e-02 -4.92e-04 -9.89e-02 -1.04e-02
## 866    8.85e-04 -1.80e-02  4.48e-03 -3.02e-03 -1.52e-02  1.80e-02  1.46e-02
## 867   -1.54e-02  7.04e-04  4.50e-03 -3.91e-03 -2.41e-02  1.25e-02  1.87e-02
## 868   -3.91e-04  5.57e-05  8.45e-04 -1.75e-04  8.24e-04  7.28e-04 -8.76e-04
## 869   -1.63e-02 -3.91e-04 -7.95e-03  2.00e-02  1.72e-02  2.65e-02 -1.17e-02
## 870    5.80e-03 -1.68e-03 -5.79e-03  2.08e-03  4.24e-03 -4.84e-03  4.17e-03
## 871   -1.38e-02  3.16e-03 -2.17e-02 -2.59e-03  3.51e-02  2.72e-02 -3.44e-02
## 872    6.25e-02  3.49e-03  9.02e-02  1.80e-02  6.98e-03 -3.58e-02  2.45e-04
## 873   -1.53e-02  2.46e-03 -1.29e-02 -6.21e-03 -1.80e-02 -1.80e-03  1.99e-02
## 874   -3.36e-04 -1.01e-02  1.26e-03  1.53e-02  5.07e-03 -1.68e-03 -2.90e-03
## 875   -2.85e-04 -6.37e-03  2.53e-03 -1.13e-03 -5.90e-03 -1.22e-03  6.70e-03
## 876    5.94e-03  4.08e-03  6.21e-03 -2.02e-03 -3.22e-04 -5.39e-03  4.12e-03
## 877    1.94e-02  1.52e-02  1.79e-02 -3.25e-02  8.39e-03 -1.90e-02 -8.20e-03
## 878    4.08e-04  1.20e-02 -1.41e-03  2.45e-03 -5.85e-03  9.11e-03  5.98e-03
## 879    1.08e-02 -1.27e-03  5.90e-03  2.02e-02 -6.60e-04 -1.55e-02  1.17e-03
## 880   -6.67e-04  3.02e-03 -1.61e-03  3.33e-03  6.52e-04  2.36e-03 -8.77e-04
## 881   -2.90e-02 -6.43e-03 -1.41e-02  2.57e-02  1.17e-02  1.59e-02 -1.35e-02
## 882    2.89e-02  2.82e-02  2.74e-02 -8.09e-03 -1.45e-02 -1.76e-04  1.41e-02
## 883   -2.25e-03 -4.92e-02 -2.02e-02  6.90e-02 -1.22e-02  4.01e-02  5.77e-03
## 884   -3.37e-03 -6.18e-04  1.08e-03 -1.18e-03  4.10e-03 -4.19e-03 -6.41e-04
## 885   -1.07e-03 -2.16e-02 -1.01e-02  1.31e-02  3.14e-03  5.69e-03 -6.93e-03
## 886    1.61e-02  1.35e-02  3.69e-03 -5.85e-03 -1.32e-02 -1.27e-02  9.52e-03
## 887   -1.27e-02  6.55e-04  2.66e-03 -4.95e-03  1.97e-02  9.83e-03 -8.74e-03
## 888   -4.02e-02  6.25e-04  2.55e-02 -1.74e-02  6.64e-02  6.74e-02 -7.92e-02
## 889   -1.33e-02  1.25e-03 -8.80e-03  1.20e-02 -1.29e-03 -1.40e-02 -2.21e-03
## 890   -3.53e-02 -3.25e-04  5.39e-02 -1.06e-02  1.85e-02  6.13e-02  4.14e-03
## 891    1.10e-04  7.56e-03 -2.85e-03  1.41e-03 -2.50e-03  1.36e-03 -1.97e-03
## 892    1.03e-04 -2.69e-06  1.98e-05  2.23e-04 -5.65e-05  1.72e-04 -4.23e-05
## 893   -4.04e-02 -3.81e-02  5.84e-02 -2.66e-02  1.13e-02 -2.74e-02 -1.12e-02
## 894   -5.50e-05 -1.06e-02 -9.16e-03 -1.79e-03  5.97e-03 -8.01e-03 -6.01e-03
## 895    2.16e-02 -3.21e-03  2.65e-02  6.06e-03 -6.10e-02  4.01e-02  5.51e-02
## 896   -2.15e-02  5.58e-03 -1.43e-02 -7.81e-03 -7.94e-04  4.70e-02 -1.15e-02
## 897    2.92e-02  2.25e-02 -2.66e-02  2.18e-02  8.42e-03  2.82e-02 -1.20e-02
## 898    7.08e-03  5.62e-03  4.07e-03  5.41e-03 -2.29e-03 -5.69e-03  3.28e-03
```

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## 899    8.53e-03 -2.99e-04  1.66e-02 -2.52e-02  2.06e-03  1.27e-02  9.46e-03
## 900   -1.16e-03  1.11e-04 -1.30e-03  1.58e-03 -1.59e-03 -4.75e-04 -1.35e-04
## 901   -8.31e-03  2.02e-05  8.73e-03 -2.45e-03  1.38e-02  5.95e-03 -8.42e-03
## 902    1.37e-02  1.14e-02 -3.08e-03 -1.52e-02  4.13e-03  5.70e-03 -1.58e-03
## 903   -4.94e-04 -1.49e-02 -3.43e-03 -2.46e-03  3.72e-03 -2.93e-03 -1.15e-03
## 904   -8.73e-04 -3.06e-02 -1.62e-02 -7.95e-03 -2.41e-03 -2.22e-02 -3.58e-03
## 905   -3.11e-03 -2.68e-03  1.81e-03 -2.17e-03  2.80e-03  2.94e-03 -4.05e-04
## 906   -3.00e-05  1.54e-02  1.27e-02 -1.06e-02  7.19e-04  1.19e-02  1.59e-02
## 907   -5.68e-03  4.17e-04 -6.88e-03 -1.22e-02  1.86e-03 -2.15e-03 -2.36e-03
## 908    5.52e-03 -1.98e-03  8.08e-03  2.54e-03  7.66e-03 -4.69e-03 -1.07e-03
## 909   -9.90e-06  4.18e-04  2.53e-04  4.48e-04  4.31e-04  9.92e-05 -2.52e-04
## 910    4.34e-02  3.60e-02  1.77e-02 -7.57e-02  2.44e-02 -4.54e-02 -2.85e-02
## 911   -7.52e-03 -1.83e-03  4.74e-03 -3.04e-03 -3.82e-03 -1.39e-03  4.24e-03
## 912   -2.56e-02 -2.22e-02  1.44e-02 -5.74e-02  1.26e-02  2.53e-02 -1.28e-02
## 913    3.76e-02  3.13e-02  1.51e-02 -1.96e-02  2.09e-02 -3.15e-02 -6.02e-03
## 914   -9.29e-02 -8.12e-02  8.16e-02 -1.39e-01  3.87e-02 -4.58e-02  1.53e-02
## 915    1.48e-03 -3.37e-02  3.23e-02  5.24e-03 -9.85e-03  2.38e-02  3.40e-02
## 916   -3.76e-02 -3.01e-02 -3.32e-02 -3.10e-02 -1.03e-02  2.01e-03  1.39e-02
## 917    8.01e-03  3.01e-04 -1.11e-02 -7.19e-03  4.28e-03 -4.60e-03  2.81e-03
## 918    4.44e-02  3.87e-02 -3.55e-02 -1.41e-02 -5.22e-02  5.39e-02  3.66e-02
## 919    3.25e-03 -2.45e-02 -1.69e-02 -1.07e-02  4.17e-03  1.15e-02 -1.38e-02
## 920   -5.32e-04 -4.24e-04  1.90e-05  8.77e-05 -1.07e-04  3.37e-04  8.06e-06
## 921   -1.85e-03 -1.49e-02  7.74e-03 -2.84e-03 -3.83e-03  4.37e-03  8.24e-03
## 922    4.03e-02  4.04e-02  3.51e-02 -1.81e-02  8.54e-03 -1.77e-03 -2.97e-04
## 923   -2.01e-03  6.98e-03  6.47e-03  9.04e-03  2.16e-03 -6.96e-03  2.53e-03
## 924   -1.03e-02 -6.23e-04  4.14e-03  1.05e-02 -5.62e-03  5.99e-03  9.61e-03
## 925   -2.25e-02 -1.36e-03  1.52e-03 -8.11e-03  2.16e-02 -6.12e-03 -1.96e-02
## 926   -2.10e-02 -8.65e-05 -9.27e-03 -3.60e-02 -4.70e-02  1.16e-02  6.53e-02
## 927    3.84e-03  2.89e-03  5.47e-04  2.89e-03  9.67e-04 -4.41e-03  2.18e-04
## 928    2.72e-02  2.36e-02  1.09e-02 -7.10e-03  1.08e-03  1.25e-02  1.20e-02
## 929    6.19e-02 -7.34e-03  2.56e-02  2.09e-02  1.47e-01  9.14e-02 -1.01e-01
## 930   -4.14e-02 -8.21e-03  1.50e-02  2.93e-02  3.66e-02 -3.44e-02 -3.97e-02
## 931    4.29e-02  3.42e-02  4.09e-02  3.46e-02  2.95e-02 -3.75e-03 -1.84e-02
## 932    2.33e-02  2.42e-02 -9.03e-03 -1.07e-02 -1.70e-02 -3.30e-03  1.81e-02
## 933    4.61e-03  9.87e-02 -7.60e-02  2.04e-02 -7.36e-02  1.79e-02  3.76e-02
## 934    2.60e-02  2.24e-02 -1.82e-02 -8.07e-03  6.39e-04  3.08e-02  4.10e-03
## 935    2.36e-02  1.94e-02  2.47e-02 -1.23e-02 -1.30e-03  1.56e-02  1.78e-03
## 936    1.42e-02  9.88e-04 -6.75e-03  2.47e-02 -2.41e-03  1.77e-02  2.35e-03
## 937    3.17e-02  2.57e-02 -1.94e-02 -1.04e-02 -3.10e-02  1.47e-02  2.34e-04
## 938    8.48e-03 -5.26e-02 -4.99e-02  2.48e-02  3.28e-02  1.87e-02 -5.36e-02
## 939    4.32e-03 -1.48e-02 -8.11e-03 -6.55e-04  4.30e-03 -3.29e-03 -5.15e-03
## 940    7.59e-02 -7.81e-05  5.44e-02  3.77e-02  7.87e-02  1.75e-02 -9.18e-02
## 941   -8.25e-02 -6.39e-02  6.23e-02  1.90e-02 -8.22e-02 -8.02e-02  7.51e-02
## 942   -1.60e-02 -2.70e-03  1.17e-02  1.47e-02 -1.43e-02 -1.65e-02  1.70e-02
## 943    7.13e-03  3.20e-04  6.42e-05  1.92e-03  1.65e-02  2.31e-03 -1.28e-02
## 944    1.24e-02  9.92e-03  9.90e-03 -2.40e-03  1.18e-02  1.26e-02 -7.32e-03
## 945   -4.29e-03  2.29e-04  1.23e-03  9.34e-03  1.34e-03 -4.25e-03 -1.11e-03
## 946   -1.27e-02  5.16e-03  2.63e-02 -5.23e-03  2.19e-02  2.96e-02 -3.26e-02
## 947   -6.08e-02 -5.12e-02 -1.53e-02 -3.87e-02  5.34e-02 -3.45e-02 -2.05e-02
## 948   -9.30e-02 -7.21e-02 -3.30e-03  1.31e-02  9.19e-02 -4.31e-02 -5.21e-02
```

```
## 949    -2.48e-02 -1.22e-03 -3.32e-02 -7.98e-03  6.72e-03  3.78e-02 -3.44e-02
## 950     2.19e-02  1.77e-02  2.68e-02 -5.35e-03 -1.26e-02 -2.27e-03  1.23e-02
## 951    -5.03e-04 -1.56e-02  1.26e-03 -6.38e-03 -8.28e-03 -1.70e-03  1.23e-03
## 952     2.85e-02  2.84e-02  3.16e-02  5.52e-02  1.56e-02  1.88e-02  7.90e-03
## 953    -5.30e-02 -4.98e-02 -2.33e-02  1.89e-02 -1.28e-02 -3.48e-02  8.69e-03
## 954     5.71e-02 -1.48e-03  5.44e-02  1.37e-02 -3.30e-02 -9.64e-02 -1.23e-02
## 955    -2.44e-03  6.84e-04  3.52e-03 -1.59e-03  4.46e-03 -1.92e-04 -6.59e-03
## 956     3.83e-03 -1.21e-04 -7.06e-04 -1.16e-02  1.86e-03  1.41e-03  3.77e-03
## 957     1.74e-04  1.38e-04 -2.01e-04 -4.56e-05  2.85e-05  3.09e-05 -6.92e-05
## 958    -3.89e-05 -1.85e-03 -4.11e-04 -6.48e-04  1.56e-03 -3.08e-04 -1.24e-03
## 959    -6.97e-04  1.57e-02  1.21e-02  2.34e-03  1.58e-02  1.26e-02 -9.31e-03
## 960     7.32e-03  5.41e-03 -8.93e-03 -1.55e-03 -4.83e-03 -6.67e-03  4.71e-03
## 961    -4.21e-04 -1.09e-02  1.96e-04 -1.49e-03 -8.68e-03  1.10e-02  9.15e-03
## 962     4.49e-02  4.14e-02 -4.16e-02 -1.74e-02 -4.55e-02 -4.15e-03  4.70e-02
## 963     3.61e-04 -3.79e-03 -2.30e-03 -1.44e-03 -2.78e-04  1.92e-03  1.91e-03
## 964     1.29e-04 -2.50e-03  3.01e-03 -3.70e-04  8.32e-04  2.58e-03 -9.09e-04
## 965     3.08e-02  2.33e-02  6.98e-04 -9.53e-03  1.35e-03  3.04e-02 -7.56e-04
## 966    -8.28e-03 -1.05e-03 -3.01e-04 -2.86e-03  9.70e-03 -9.65e-03 -7.26e-03
## 967     4.94e-02 -9.11e-03 -4.71e-02 -7.68e-02 -1.40e-02 -9.46e-02 -3.87e-02
## 968    -7.03e-03 -9.97e-04 -6.86e-03 -2.33e-03  2.12e-03  3.90e-03  5.37e-04
## 969    -1.32e-02 -2.58e-04 -9.04e-03 -2.16e-02 -8.20e-03  1.89e-02  1.59e-02
## 970    -1.53e-02 -1.29e-02 -3.82e-03  2.49e-03  1.68e-02  1.05e-02 -1.12e-02
## 971    -1.00e-03 -5.71e-05 -1.55e-03 -1.80e-03  3.25e-04 -1.37e-03 -5.38e-05
## 972     1.06e-02  9.25e-03 -5.86e-03  7.76e-03 -8.10e-03  4.43e-03  8.10e-03
## 973     4.56e-03  4.68e-03 -7.67e-03 -2.68e-03 -1.61e-03 -5.18e-03  1.52e-03
## 974     1.02e-03  1.76e-05 -1.44e-04 -9.52e-04  6.09e-04  1.07e-03 -7.59e-04
## 975     2.43e-02  2.24e-02  1.87e-02  5.32e-02 -2.22e-02 -2.17e-02  2.05e-02
## 976    -1.02e-01 -8.37e-02  5.30e-02  1.13e-01  5.08e-02  1.34e-02 -2.86e-02
## 977    -4.15e-03  4.38e-03 -8.14e-04 -3.34e-03 -4.81e-03  6.80e-03  1.06e-02
## 978     9.34e-04 -2.12e-02 -1.67e-02  1.30e-02  3.89e-03 -2.51e-03  5.07e-04
## 979    -2.17e-03  9.51e-03  7.07e-03  1.04e-02 -1.58e-03  2.72e-03 -7.40e-04
## 980    -1.10e-02 -1.45e-03 -1.18e-02 -3.69e-03 -4.14e-03 -6.15e-03  4.52e-03
## 981    -6.43e-02 -5.39e-02  7.88e-02 -5.49e-02 -2.87e-02  6.78e-02  2.60e-02
## 982     5.03e-02  1.50e-03  7.66e-03  1.87e-02  6.21e-02  5.99e-03 -4.32e-02
## 983    -1.11e-04 -1.96e-03  5.57e-04 -2.05e-03  8.18e-04 -3.22e-04 -6.78e-04
## 984    -4.87e-03 -3.82e-03  6.25e-03  1.20e-03 -2.30e-03  5.06e-03  1.39e-03
## 985    -2.15e-02 -1.63e-03  2.05e-02  2.24e-02 -2.07e-02  3.24e-02  1.45e-02
## 986     5.71e-02  7.20e-03  8.85e-02  2.06e-02  4.62e-03  2.58e-02 -1.83e-03
## 987    -2.07e-02  1.56e-03  2.97e-02  2.91e-02 -8.60e-04 -2.54e-02 -3.22e-03
## 988    -1.09e-02  6.59e-04  9.49e-03 -3.94e-03 -2.46e-03  8.70e-03 -3.81e-03
## 989     5.86e-04 -3.60e-02 -1.27e-02 -6.78e-03 -7.39e-03 -2.61e-02  9.88e-03
## 990    -1.52e-02  1.35e-03  1.21e-02 -5.31e-03  1.45e-02 -2.58e-03 -6.42e-03
## 991    -6.22e-03 -1.78e-04  1.87e-03 -2.53e-03  1.45e-02 -7.26e-03 -1.77e-02
## 992    -2.95e-02 -1.52e-03  3.88e-02 -1.07e-02 -4.67e-02  2.16e-02  3.73e-02
## 993     5.68e-03 -1.89e-03  1.43e-03  2.84e-03 -9.36e-04  1.26e-03  5.55e-03
## 994    -9.89e-03  5.77e-04 -1.35e-02 -1.96e-02 -4.35e-03 -4.11e-03 -2.54e-04
## 995    -1.48e-02  3.10e-03  6.36e-03 -2.98e-02 -1.68e-02 -3.62e-03  1.01e-02
## 996     5.02e-02  4.51e-02 -1.22e-02  3.55e-02 -3.39e-02 -2.53e-03  6.72e-02
## 997    -2.96e-02 -5.71e-03 -4.41e-02  2.42e-02 -1.39e-02 -3.31e-02  7.16e-03
## 998    -4.69e-02 -3.87e-02 -2.74e-02  2.45e-02 -2.94e-02  1.64e-02  6.04e-03
```

```
## 999     2.92e-02   2.34e-02   3.62e-02   2.13e-02   3.22e-02  -2.62e-02  -2.71e-02
## 1000    3.07e-03  -8.53e-04  -7.63e-03   1.61e-03  -4.26e-03  -6.70e-03   7.17e-03
## 1001   -8.38e-03   5.62e-04   8.68e-03  -2.12e-03   1.05e-02   1.56e-02  -4.14e-03
## 1002    2.80e-02   2.13e-02  -2.17e-02  -5.23e-03   2.06e-02  -5.06e-03  -1.49e-02
## 1003    2.34e-02   1.99e-02   1.70e-03  -9.54e-03  -1.92e-02  -2.23e-02   4.44e-03
## 1004   -1.20e-02  -1.57e-03  -7.34e-03  -3.63e-03   8.51e-03  -1.38e-02  -4.54e-03
## 1005    1.40e-02   1.15e-02  -1.54e-02  -1.69e-02   1.29e-02   1.34e-02  -9.66e-03
## 1006    2.95e-02   2.49e-02   1.54e-02   2.42e-02  -3.99e-02   3.69e-02   2.51e-02
## 1007   -7.46e-02  -6.01e-02   6.18e-02  -5.70e-02   3.64e-02  -7.52e-02  -7.15e-02
## 1008   -5.84e-02  -4.98e-02   5.84e-02   2.02e-02   1.01e-01   5.56e-02  -6.95e-02
## 1009    5.30e-04   4.07e-04   1.38e-04  -2.07e-04   4.90e-04  -3.63e-04  -5.35e-04
## 1010    4.85e-04  -2.86e-04   3.68e-04   2.28e-04   3.17e-05  -1.33e-03   5.33e-04
## 1011   -7.19e-03   3.05e-02   1.54e-02   3.95e-02   4.53e-05   2.86e-02  -4.67e-03
## 1012    5.15e-02   4.21e-02  -4.87e-02  -1.31e-02   5.81e-02   2.13e-02  -5.64e-02
## 1013   -4.44e-02  -3.93e-02  -2.72e-02  -1.01e-01   1.92e-02   1.91e-03  -1.93e-02
## 1014   -4.78e-04  -8.18e-03  -1.61e-03  -1.55e-03  -5.39e-03   7.24e-03   4.96e-03
## 1015    2.83e-02   2.20e-02  -2.65e-02  -1.05e-02  -5.66e-04   1.09e-02  -3.42e-02
## 1016   -1.80e-03  -1.85e-02  -1.30e-02  -3.13e-03   1.03e-02   1.51e-02  -4.32e-03
## 1017   -5.25e-02  -4.23e-02  -7.74e-02  -4.13e-02   2.13e-02  -3.60e-02  -2.54e-02
## 1018   -1.49e-02  -9.90e-04  -1.43e-02  -3.68e-03   2.44e-03   2.06e-02   3.54e-03
## 1019    2.10e-02   1.68e-02   2.35e-02   1.69e-02  -3.81e-03  -1.93e-02   2.99e-03
## 1020   -1.90e-02  -1.60e-03  -2.78e-02   2.15e-02  -9.30e-03   2.65e-02   9.53e-03
## 1021   -4.20e-03  -1.67e-04  -1.14e-03  -1.54e-03   6.77e-03  -5.87e-03  -1.50e-03
## 1022    5.83e-02   1.19e-02  -6.19e-03  -5.20e-02  -7.86e-02  -7.43e-02   6.76e-02
## 1023    5.94e-03   5.59e-03  -3.20e-03  -7.04e-03   4.39e-03  -5.45e-04  -3.52e-03
## 1024   -4.83e-03   1.42e-03  -7.37e-03  -1.60e-03  -2.96e-05   1.43e-02   2.15e-03
## 1025    5.38e-03  -1.73e-03   7.57e-03   5.00e-03  -1.42e-02   2.87e-03   1.74e-02
## 1026   -1.64e-02   4.69e-04   1.66e-02  -5.43e-03  -2.40e-02  -1.37e-03   2.07e-02
## 1027    1.85e-03   1.26e-04   3.06e-03   5.98e-04  -3.00e-03   2.60e-03   4.14e-03
## 1028   -1.02e-02  -1.27e-03  -9.62e-03   1.03e-02   8.31e-03   5.65e-03  -5.30e-03
## 1029   -1.37e-02   2.65e-03  -1.71e-02  -2.76e-02   2.80e-03  -4.99e-03   3.55e-03
## 1030    7.95e-04   2.13e-02   1.20e-02   4.88e-03   1.48e-02   5.12e-03  -1.84e-02
## 1031   -3.70e-04  -8.34e-03   7.25e-03  -2.38e-03   9.72e-05  -5.50e-03  -2.20e-03
## 1032    1.78e-04   1.42e-01  -5.86e-02   3.73e-02  -1.81e-02   1.13e-01  -4.87e-02
## 1033   -4.90e-02  -4.74e-02  -2.91e-02  -3.04e-02  -5.28e-02  -7.13e-02   2.70e-02
## 1034   -1.08e-01  -9.64e-02   1.30e-01   1.20e-01   1.64e-01  -4.73e-02  -1.22e-01
## 1035    4.00e-03  -3.83e-02  -3.35e-02   6.80e-02   9.99e-03   3.62e-02  -5.29e-03
## 1036    1.07e-02   8.82e-03  -1.03e-02  -1.29e-02   1.53e-03   4.11e-03   1.84e-03
## 1037    5.17e-02   5.33e-03   6.61e-02   1.49e-02  -4.89e-02   5.55e-02   3.98e-02
## 1038   -1.26e-02   2.30e-03   1.14e-02  -5.14e-03  -1.83e-02  -1.85e-02   5.71e-03
## 1039    7.34e-04  -5.38e-03  -4.73e-03  -4.56e-04  -1.36e-03   4.98e-03   2.65e-03
## 1040    5.93e-02   4.17e-03  -5.73e-02   2.00e-02  -2.82e-02   1.33e-02   2.84e-02
## 1041    3.85e-04   9.73e-03  -2.77e-03  -5.99e-03  -1.36e-02  -3.52e-03   1.73e-02
## 1042    2.00e-02   1.60e-02  -1.23e-02  -5.97e-03   1.43e-02   2.14e-02  -2.28e-02
## 1043    1.27e-02   1.19e-02  -1.12e-02   8.90e-03   9.60e-03  -2.00e-03  -6.81e-03
## 1044   -5.75e-03  -4.74e-03  -4.97e-03   6.93e-03  -5.36e-03  -1.83e-03   4.44e-03
## 1045   -3.37e-03   6.47e-04  -5.94e-03  -7.31e-04   1.89e-03  -1.73e-03   1.13e-03
## 1046    4.81e-05   1.50e-03   4.47e-05   2.77e-04  -4.44e-04   3.33e-04  -3.15e-05
## 1047    2.70e-02   2.20e-02   1.71e-02  -4.76e-03   2.01e-02   1.32e-02  -1.75e-02
## 1048   -1.52e-02  -9.29e-04   7.81e-03  -4.62e-03  -1.77e-02   2.18e-02   1.33e-02
```

```
## 1049  1.66e-02  1.39e-02 -1.07e-02  3.20e-02 -7.77e-03  1.86e-02  1.28e-02
## 1050 -5.68e-03  6.02e-05 -9.71e-03 -1.54e-03 -6.61e-03 -2.18e-03  3.34e-03
## 1051  2.70e-02  2.10e-02 -6.97e-03 -6.10e-03  3.19e-02 -2.13e-02 -1.97e-02
## 1052 -1.89e-02 -1.17e-03 -1.05e-02 -5.54e-03 -1.91e-02 -4.28e-03  2.04e-02
## 1053 -7.35e-04 -6.89e-03  2.36e-04 -2.13e-03 -2.03e-03 -7.48e-04  2.22e-03
## 1054  7.02e-03 -1.73e-03  1.52e-02  1.94e-02  8.94e-03  3.70e-03 -1.11e-02
## 1055 -1.76e-03  1.75e-02 -2.02e-02  2.45e-03 -6.30e-03 -7.69e-03 -2.24e-03
## 1056  2.27e-03 -2.18e-02 -2.78e-03 -4.39e-03  1.34e-02  2.22e-02 -3.20e-02
## 1057  6.64e-02  4.10e-03  7.70e-02  1.77e-02 -3.82e-02  1.85e-02  2.32e-02
## 1058 -4.89e-02 -4.34e-02 -3.14e-02  2.23e-02  2.07e-02 -3.51e-02 -7.97e-03
## 1059 -5.24e-02 -3.88e-02 -4.74e-02 -3.33e-02  2.11e-02 -2.76e-02 -4.52e-02
## 1060 -5.37e-03 -5.26e-04 -2.44e-03 -1.81e-03  7.96e-04 -1.70e-03 -1.13e-03
## 1061 -2.74e-02 -2.52e-02  2.56e-02  1.05e-02 -1.50e-02 -3.82e-02  1.50e-02
## 1062 -8.67e-03  9.10e-05 -4.19e-03 -3.88e-03  7.28e-05  4.72e-03  1.71e-05
## 1063  4.93e-02  4.26e-02 -3.60e-02 -1.11e-02 -2.03e-02 -4.61e-03  4.99e-03
## 1064  4.86e-04 -8.07e-03 -2.62e-03  5.51e-03  7.81e-03 -1.43e-03 -8.85e-03
## 1065 -1.02e-04 -7.86e-04  3.84e-04 -2.08e-04  1.06e-04 -1.28e-04  7.89e-05
## 1066 -7.80e-03  2.04e-03  1.92e-02 -2.55e-03 -1.72e-02  2.11e-04  1.30e-02
## 1067 -1.60e-02 -5.29e-04 -9.93e-03  1.99e-02  2.22e-02  1.06e-02 -1.52e-02
## 1068 -1.57e-02  1.58e-03 -1.09e-02 -5.73e-03 -2.11e-02 -4.15e-03  2.30e-02
## 1069 -3.93e-02 -3.79e-02 -5.61e-02 -3.65e-02 -2.20e-02 -6.93e-02  4.59e-03
## 1070 -1.09e-03 -3.55e-02 -5.64e-03  2.43e-02 -1.24e-02 -3.32e-03  1.18e-02
## 1071  3.21e-02  2.92e-02  1.40e-02 -1.31e-02 -2.97e-02  4.68e-02  1.87e-02
## 1072 -9.93e-03 -1.11e-03  1.23e-02  1.06e-02 -1.08e-02  1.72e-02  1.10e-02
## 1073 -1.48e-02 -1.85e-03 -1.93e-02 -4.21e-03  9.56e-03  6.59e-03 -8.68e-03
## 1074 -1.78e-02 -8.23e-04 -2.83e-02  5.23e-02  3.16e-03  1.11e-02 -9.10e-03
## 1075  3.20e-02  2.79e-02 -7.11e-03 -1.45e-02  9.23e-04 -8.09e-03  4.91e-03
## 1076  8.73e-03  6.64e-03 -4.91e-04 -4.45e-03 -6.21e-04 -7.30e-03 -4.79e-03
## 1077 -3.93e-03  2.14e-02  1.61e-02  1.82e-03 -1.35e-02  1.87e-02  2.09e-02
## 1078 -6.42e-02 -5.24e-02  8.18e-02 -5.66e-02 -2.47e-02 -7.38e-02 -7.36e-03
## 1079 -3.97e-03 -4.68e-04  7.43e-03 -1.72e-03  5.27e-03  5.32e-03 -7.16e-03
## 1080  2.38e-02  1.96e-02  2.86e-02 -7.61e-03 -3.22e-02  1.44e-02  1.97e-02
## 1081  2.83e-03 -5.40e-04 -3.14e-03  2.35e-03 -3.65e-03 -2.73e-03  5.60e-03
## 1082  3.04e-02  2.43e-02 -2.64e-02  1.90e-02 -3.17e-02  1.51e-02  1.99e-02
## 1083  3.22e-02  2.56e-02 -4.10e-02 -1.11e-02 -7.03e-02 -8.36e-03  6.74e-02
## 1084 -8.51e-02 -7.14e-02  5.18e-02  2.40e-02 -2.43e-02 -9.06e-02 -3.49e-02
## 1085 -1.58e-02  2.69e-04 -3.17e-03  1.81e-02 -4.41e-02 -3.21e-03  3.67e-02
## 1086 -6.04e-02 -5.25e-02 -8.13e-02  2.59e-02 -8.71e-02  1.06e-02  7.64e-02
## 1087  6.12e-02  5.25e-02 -6.17e-02  9.41e-02  6.87e-03 -5.24e-02  1.54e-02
## 1088 -1.37e-02  7.13e-04  1.05e-02 -5.84e-03  1.08e-02 -2.48e-03  4.02e-03
## 1089 -1.03e-02  2.83e-05  9.91e-04  1.37e-02  2.02e-02  8.08e-03 -2.08e-02
## 1090 -2.34e-03 -1.60e-04  2.44e-03 -8.70e-04 -2.77e-03 -2.89e-03  3.16e-03
## 1091 -1.64e-02 -2.26e-03  2.10e-02  3.74e-02  3.24e-02  2.34e-02 -3.88e-02
## 1092  2.98e-02  2.49e-02  2.37e-02  2.18e-02 -2.86e-02  1.81e-02  2.18e-02
## 1093  1.54e-03 -6.33e-05  3.07e-03  4.65e-04 -1.07e-03  2.69e-03  1.24e-04
## 1094 -2.62e-02 -1.26e-03  2.48e-02 -1.46e-02  2.55e-04 -2.64e-02  1.07e-02
## 1095 -1.40e-02  1.80e-03  2.30e-02 -7.52e-03 -1.12e-02  3.16e-02  1.28e-02
## 1096 -1.67e-02  2.12e-03 -1.30e-02 -7.61e-03 -4.23e-03 -6.50e-03  1.57e-02
## 1097  2.84e-02  2.35e-02  2.31e-02 -1.41e-02  1.33e-02 -1.82e-02 -2.59e-02
## 1098 -5.49e-03 -4.55e-02  1.32e-02  2.45e-02  5.60e-03  3.74e-02 -4.25e-03
```

```
## 1099 -1.87e-04 -6.65e-03 -2.33e-03 -2.03e-03 -6.43e-03 -4.96e-03  6.24e-03
## 1100  8.10e-04 -6.57e-03 -7.23e-05 -1.01e-03 -9.39e-03  2.57e-03  7.25e-03
## 1101 -1.45e-02 -9.34e-04 -2.80e-02  2.18e-02  7.70e-03 -5.82e-03 -1.39e-03
## 1102 -9.81e-03 -1.20e-03 -5.70e-04  8.81e-03 -1.81e-03  4.51e-03  3.38e-03
## 1103  3.66e-02  2.98e-02 -7.60e-03 -1.10e-02  1.09e-02 -2.77e-02 -2.85e-03
## 1104 -2.79e-04  2.42e-03  2.18e-03  3.16e-04 -8.70e-04  8.52e-04  6.58e-05
## 1105 -6.82e-03 -8.40e-04 -7.61e-03 -1.19e-02  1.24e-03 -2.59e-03  1.99e-04
## 1106 -1.91e-02  1.22e-03  2.75e-02 -5.82e-03 -5.65e-03  3.72e-02 -6.71e-04
## 1107  5.91e-02  3.97e-03 -1.45e-02 -7.01e-02 -1.34e-01 -9.50e-02  1.52e-01
## 1108 -1.02e-02  1.24e-04 -2.27e-03 -3.47e-03 -7.62e-04 -2.27e-03  4.02e-04
## 1109  2.85e-02  2.31e-02 -1.98e-03  2.21e-02  4.01e-03  3.53e-02 -3.11e-03
## 1110 -1.03e-02  4.50e-04  1.96e-02 -3.78e-03 -1.23e-02  8.36e-03  3.99e-03
## 1111  5.30e-03  7.68e-02 -1.41e-03  1.59e-02  6.35e-03 -6.83e-02 -4.55e-03
## 1112  9.22e-02 -5.40e-03  5.44e-02 -7.26e-02 -5.05e-02  1.08e-01 -7.98e-02
## 1113  7.25e-02 -5.12e-04  5.15e-02  1.76e-02  8.30e-02 -4.33e-02 -6.91e-02
## 1114 -5.78e-04  1.30e-04  1.11e-04 -2.72e-04 -8.36e-04  9.92e-04  8.81e-04
## 1115 -1.20e-02  1.20e-03  5.37e-03 -3.04e-03  1.04e-02  2.36e-02 -4.25e-04
## 1116  3.43e-02  2.72e-02  4.15e-02 -1.30e-02  1.25e-02 -2.60e-02 -1.72e-02
## 1117  8.02e-03 -1.13e-03 -3.08e-03 -7.47e-03 -5.82e-03  1.05e-02  6.24e-03
## 1118 -4.49e-03 -1.68e-04  4.78e-03 -1.75e-03 -3.56e-03 -4.91e-03  3.29e-03
## 1119 -1.35e-02 -3.25e-03 -1.37e-02 -5.30e-03 -3.20e-03 -1.49e-02  3.02e-03
## 1120 -3.16e-03  5.95e-04 -2.58e-03 -1.00e-03  1.17e-02  2.54e-03 -1.35e-02
## 1121  2.62e-02  2.07e-02 -2.14e-02 -6.96e-03 -2.54e-02  1.01e-02  2.43e-02
## 1122  1.85e-02  1.56e-02 -4.67e-03 -6.59e-03  4.54e-03 -4.61e-03 -3.97e-04
## 1123  5.02e-02  4.14e-02 -2.79e-02 -1.12e-02  6.14e-02  5.20e-02 -4.76e-02
## 1124  4.37e-02  3.67e-02  2.61e-02 -1.50e-02 -4.53e-03 -5.26e-03  1.87e-03
## 1125  6.75e-03 -1.20e-03 -1.17e-02  1.48e-02  1.46e-02  1.95e-03 -1.04e-02
## 1126 -2.12e-04 -1.13e-02 -7.12e-03 -2.47e-03  8.89e-03 -7.83e-03 -1.26e-02
## 1127 -1.06e-02  3.72e-04  3.46e-03 -5.22e-03 -5.85e-03 -3.39e-03 -5.07e-03
## 1128 -2.39e-03 -3.02e-04  2.30e-03 -3.99e-03  2.78e-04 -6.17e-04  2.68e-04
## 1129 -2.79e-02  5.18e-03 -1.38e-02 -5.20e-02 -2.07e-02  5.25e-02  1.62e-02
## 1130  7.76e-04  6.22e-04 -8.76e-04  5.17e-04 -2.96e-04 -6.80e-04 -4.15e-04
## 1131 -4.46e-03  1.34e-04  6.14e-03 -9.78e-03 -8.73e-03 -1.36e-03  9.74e-03
## 1132 -2.04e-02 -3.04e-03 -2.64e-02  2.01e-02 -1.49e-02 -6.71e-03  1.21e-02
## 1133 -7.09e-03 -1.73e-04 -6.45e-03 -2.58e-03 -9.69e-03  1.17e-02  7.01e-03
## 1134 -6.79e-05  3.23e-04  1.65e-04  3.63e-04 -5.00e-04 -1.11e-04  4.44e-04
## 1135 -9.27e-03 -7.73e-04  1.28e-03  1.09e-02  2.43e-03 -1.03e-02 -3.74e-03
## 1136  2.16e-03  2.09e-03  1.05e-03 -3.23e-03  2.67e-03  2.53e-03 -3.33e-03
## 1137  4.91e-02  6.42e-03 -3.98e-02  2.06e-02 -1.01e-02 -3.25e-02  1.29e-02
## 1138 -4.38e-02 -2.08e-03 -3.37e-02  3.22e-02  2.40e-02 -9.26e-03 -1.88e-02
## 1139 -2.15e-02  4.30e-03  3.06e-02 -1.28e-02 -4.19e-02 -2.48e-03  5.96e-02
## 1140 -6.07e-04 -8.38e-05  9.29e-04 -1.06e-03  5.62e-04 -6.48e-04 -3.92e-04
## 1141  4.72e-04 -3.80e-03  4.64e-03 -1.18e-03 -1.39e-03 -2.59e-03 -1.88e-03
## 1142 -2.58e-02 -4.00e-03  2.21e-02  2.15e-02  4.84e-03  1.64e-02  4.66e-03
## 1143  5.67e-02  4.86e-02  3.00e-02  9.30e-02 -1.10e-02  6.91e-02  9.83e-03
## 1144 -1.56e-02  2.64e-03  1.57e-02  1.72e-02 -1.54e-02  3.09e-02  1.81e-02
## 1145  2.38e-02  2.30e-02  1.14e-02 -9.65e-03 -1.23e-02  3.48e-02  1.20e-02
## 1146 -2.24e-02 -5.92e-04 -1.12e-02 -8.01e-03 -2.72e-02 -6.14e-03  2.39e-02
## 1147 -3.64e-04 -1.02e-02  6.21e-03 -1.18e-02 -4.91e-03 -6.59e-03  5.53e-03
## 1148 -7.48e-03  1.95e-03 -6.50e-03 -2.22e-03  1.51e-02  1.82e-02 -8.94e-03
```

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## 1149 -6.84e-03  1.14e-03 -3.11e-03 -1.34e-03 -5.51e-03  1.48e-02  5.56e-03
## 1150  1.85e-04 -1.35e-02  6.79e-04  1.06e-02  1.47e-02  1.23e-02 -1.25e-02
## 1151  1.92e-03 -5.27e-04 -3.08e-03  4.38e-03  9.92e-05 -4.22e-03 -1.57e-03
## 1152 -3.34e-03 -5.66e-02  4.41e-02  7.51e-02 -3.40e-02  5.65e-02  2.65e-02
## 1153  1.76e-02  1.33e-02 -2.54e-02 -7.43e-03  8.61e-03 -1.98e-02 -8.25e-03
## 1154 -3.65e-02 -3.43e-02  1.48e-02  2.12e-02  1.57e-02  4.23e-02 -1.37e-02
## 1155  3.15e-03 -9.92e-04  7.10e-03  1.58e-03  8.07e-04  1.96e-03  3.73e-03
## 1156  3.40e-04  5.07e-03  1.97e-03 -3.31e-03  5.24e-03  1.00e-03 -6.12e-03
## 1157 -6.00e-03  4.19e-04 -7.09e-03  1.13e-02  9.03e-04 -3.88e-03 -1.45e-03
## 1158  1.09e-02 -7.39e-04 -5.74e-03  5.00e-03  7.04e-03  2.35e-03 -1.30e-02
## 1159 -5.84e-03 -1.23e-04 -5.87e-03 -2.04e-03 -2.86e-03 -2.08e-03  1.86e-03
## 1160  3.43e-02  2.95e-02 -2.06e-02 -7.52e-03 -2.09e-02 -5.91e-03  1.83e-02
## 1161 -1.53e-03  1.93e-02 -2.01e-03 -1.50e-02  1.83e-03  1.41e-02 -1.29e-03
## 1162 -1.47e-02 -1.20e-03  4.97e-03  1.27e-02 -2.92e-02 -1.99e-03  2.24e-02
## 1163  5.18e-02 -6.78e-03 -3.63e-02 -5.86e-02  2.69e-02 -1.20e-01 -1.17e-02
## 1164 -1.26e-02  1.20e-03 -2.24e-04 -2.67e-03  2.37e-02  9.89e-03 -1.85e-02
## 1165  3.62e-02  3.04e-02 -2.95e-02 -1.22e-02 -4.83e-02 -3.37e-02  4.78e-02
## 1166 -2.33e-02  1.67e-03  3.43e-02 -1.05e-02 -1.91e-03 -2.11e-02  1.06e-02
## 1167 -2.14e-03 -2.75e-04 -2.88e-03  2.12e-03 -4.33e-04 -2.63e-03 -9.06e-04
## 1168  3.96e-03  7.64e-02 -1.02e-02 -1.09e-01  3.19e-02  4.69e-02 -2.10e-02
## 1169  4.45e-02  4.12e-02  6.87e-02 -2.55e-02  5.57e-02 -4.08e-02 -4.51e-02
## 1170 -5.62e-03 -8.41e-04 -4.63e-03 -9.78e-03  5.16e-03 -2.29e-03 -4.24e-03
## 1171  2.05e-02  1.82e-02 -2.31e-02 -8.69e-03  8.95e-03 -2.20e-02 -4.17e-03
## 1172 -5.56e-02 -4.77e-02  3.10e-03  8.75e-03 -8.73e-03 -6.16e-02 -1.04e-02
## 1173  2.21e-02  1.89e-02  2.11e-02  1.82e-02 -5.32e-03 -4.45e-03  2.16e-03
## 1174 -1.02e-02  4.54e-05  1.33e-02 -3.51e-03 -2.15e-02  1.70e-02  1.48e-02
## 1175  1.08e-03  1.19e-02  5.11e-03  1.20e-02  4.83e-03  2.32e-03 -3.00e-03
## 1176 -3.99e-03 -1.10e-04  1.03e-04 -2.02e-03 -3.72e-03  3.21e-03  2.83e-03
## 1177 -6.91e-03  1.21e-04 -4.54e-04 -3.26e-03  7.15e-03  4.16e-03 -1.01e-02
## 1178 -1.93e-03  9.59e-03 -6.05e-03 -8.39e-03 -1.36e-02 -1.02e-02  1.61e-02
## 1179  2.04e-02  1.67e-02  2.86e-02 -9.55e-03  6.93e-03 -2.08e-03 -6.73e-03
## 1180 -1.87e-04  5.06e-03  2.19e-04  7.47e-04  1.10e-03 -1.63e-03 -1.53e-03
## 1181  2.85e-02  2.32e-02 -9.11e-03 -9.33e-03  1.25e-02  1.14e-02  1.21e-02
## 1182 -2.79e-03  1.37e-04  3.34e-03  3.27e-03 -8.09e-04 -7.30e-04  1.13e-03
## 1183  1.21e-03 -4.63e-05 -1.52e-03 -9.17e-04  1.42e-03  3.33e-05 -1.08e-03
## 1184 -6.51e-04  1.16e-02  3.95e-03  1.25e-02 -2.68e-03 -1.06e-02  2.03e-03
## 1185  4.62e-03 -4.81e-04  7.98e-03  2.41e-03 -1.39e-02  3.74e-03  1.21e-02
## 1186  2.90e-03 -6.32e-04 -7.11e-07 -6.07e-03 -6.37e-03  1.17e-03  1.42e-02
## 1187 -7.43e-02 -6.24e-02 -6.77e-02  3.14e-02  3.88e-02  5.44e-02 -5.82e-02
## 1188  1.27e-02 -5.54e-04  1.77e-02  3.00e-03  4.59e-03  1.66e-02 -1.52e-02
## 1189 -9.63e-03 -5.53e-02  3.71e-02  3.59e-02 -4.18e-02  2.30e-02  4.56e-02
## 1190  1.13e-03  1.26e-02  1.08e-02  2.46e-03  4.80e-03  9.64e-03 -2.68e-03
## 1191  9.94e-05  2.00e-03 -1.23e-03  3.94e-04  5.65e-04 -8.37e-04 -5.93e-04
## 1192 -9.39e-03 -5.98e-04  2.74e-04 -3.98e-03 -5.31e-03 -9.87e-03  6.63e-03
## 1193  1.40e-03 -3.89e-02 -5.24e-03 -6.38e-03  2.41e-02  3.47e-02  2.65e-03
## 1194  3.00e-02  2.41e-02  2.66e-02  2.30e-02  1.11e-02  2.11e-02 -8.49e-03
## 1195 -1.16e-03  1.27e-02 -9.53e-03  1.51e-02 -5.05e-03 -4.84e-03  6.14e-03
## 1196  6.70e-05  5.69e-05  6.10e-05 -2.39e-05  3.12e-06 -2.52e-06 -2.52e-05
## 1197  3.24e-02  2.90e-02 -1.84e-02 -8.78e-03 -5.03e-02 -6.92e-03  5.74e-02
## 1198  2.58e-02  2.26e-02  1.40e-02 -1.02e-02  1.01e-02  3.46e-02 -1.04e-02
```

```
## 1199 -1.27e-03 -1.68e-02  1.38e-02 -7.25e-03 -5.88e-03 -9.82e-03  4.06e-03
## 1200 -1.15e-02  1.01e-03 -7.02e-03 -3.07e-03 -9.26e-03 -3.81e-03  8.80e-03
## 1201 -7.10e-04 -2.37e-02  1.44e-02 -5.34e-03  1.36e-02 -1.58e-02 -7.92e-03
## 1202 -6.07e-02 -5.23e-02  6.62e-02 -4.70e-02 -5.85e-02  1.25e-02  5.26e-02
## 1203 -1.90e-03  5.07e-05 -2.13e-03 -5.55e-04  1.70e-03 -6.48e-04 -1.12e-03
## 1204  3.04e-03 -1.24e-03 -5.35e-03  8.56e-03  1.25e-02  5.36e-03 -1.01e-02
## 1205  5.60e-02 -2.00e-03  8.67e-02  1.33e-02 -7.80e-02  2.71e-02 -1.44e-03
## 1206 -8.94e-02 -7.53e-02  9.27e-02  2.11e-02  3.69e-02 -4.01e-02 -3.55e-02
## 1207  1.01e-03  9.21e-04 -6.25e-04 -4.83e-04  6.23e-04 -9.98e-04 -2.92e-04
## 1208  6.65e-03 -2.30e-02 -1.65e-02  2.19e-02  2.11e-02  9.56e-03 -1.59e-02
## 1209  5.71e-03  5.02e-04 -1.84e-03 -6.64e-03  5.08e-03  6.90e-03 -8.53e-03
## 1210 -1.59e-04  6.58e-03  5.48e-03 -9.56e-03 -2.17e-04  5.03e-03  7.78e-04
## 1211  1.59e-03  1.22e-04  7.69e-04  2.83e-03 -1.56e-03 -7.05e-04 -1.31e-04
## 1212 -1.26e-03 -2.38e-02  2.24e-02  3.52e-02  2.66e-02 -1.29e-02 -3.61e-02
## 1213 -1.30e-02 -2.13e-03  2.09e-02  1.40e-02  1.67e-02 -1.61e-02 -7.05e-03
## 1214  1.32e-02  1.14e-01  1.10e-01  2.60e-02 -3.48e-03  8.07e-02 -3.02e-03
## 1215 -1.48e-03  2.66e-04 -3.52e-03 -3.53e-03 -4.67e-03 -2.66e-03  3.16e-03
## 1216  4.79e-02  3.88e-02 -3.01e-02  3.93e-02  8.37e-02 -4.73e-02 -8.03e-02
## 1217 -4.17e-03  5.92e-04 -2.75e-03 -1.53e-03  5.97e-03 -7.27e-03 -7.13e-03
## 1218 -1.65e-03 -2.38e-04  4.64e-04 -2.77e-03  2.46e-03 -5.64e-04 -2.29e-03
## 1219  7.75e-03  6.17e-03  6.82e-03 -2.12e-03 -5.11e-03 -8.04e-04  1.75e-03
## 1220 -3.59e-03 -3.59e-04  3.93e-03 -1.49e-03  3.05e-03 -7.61e-04 -1.07e-03
## 1221  1.06e-02  8.74e-03  4.51e-03 -4.50e-03 -6.28e-03 -9.70e-03  1.22e-02
## 1222 -2.69e-04  1.34e-04 -2.47e-04  2.88e-04  1.43e-04 -2.36e-05  1.28e-04
## 1223  7.45e-02  1.87e-02 -1.72e-02 -1.34e-01  1.31e-02  1.63e-02 -1.70e-02
## 1224  5.36e-02 -1.72e-03  5.72e-02 -1.39e-01  7.38e-02  1.40e-02 -6.87e-02
## 1225 -1.97e-02 -4.92e-03  1.59e-03  3.72e-02  5.40e-03 -4.95e-03 -2.66e-03
## 1226  3.16e-02  2.56e-02  1.79e-02  1.56e-02  2.17e-02  1.48e-02 -3.49e-02
## 1227 -2.63e-02 -3.36e-03  1.45e-02 -8.73e-03  2.85e-02 -5.16e-03 -1.61e-02
## 1228 -5.37e-03 -7.55e-04 -1.71e-04 -1.87e-03  5.29e-03 -1.76e-03 -3.72e-03
## 1229 -1.01e-02 -9.49e-05  2.02e-03  2.07e-02  5.49e-04  6.77e-03 -1.10e-03
## 1230 -3.02e-02 -1.62e-03 -3.15e-02 -1.08e-02  5.07e-03  4.11e-02  1.06e-02
## 1231 -1.45e-03 -3.73e-02 -2.04e-02 -8.28e-03  3.11e-02  2.81e-02 -2.51e-02
## 1232  6.65e-03  5.66e-03  7.84e-03 -1.46e-03  1.13e-03  3.21e-03  1.97e-03
## 1233  3.93e-03 -2.59e-04 -4.30e-03  1.07e-03 -4.22e-03  1.36e-03  2.29e-03
## 1234 -1.11e-02 -1.75e-03  1.58e-02 -3.40e-03  9.68e-03 -1.07e-02 -3.81e-03
## 1235 -4.34e-03  1.05e-03 -4.78e-03 -1.75e-03 -5.75e-03  3.50e-03  3.23e-03
## 1236  1.49e-03 -8.06e-03 -2.75e-03 -1.62e-03 -2.58e-03 -6.18e-03 -6.96e-04
## 1237 -3.33e-03  7.51e-02  6.45e-02 -5.92e-02  1.83e-03 -6.96e-02 -2.14e-02
## 1238 -5.59e-02 -4.65e-02 -7.52e-02 -1.11e-01 -2.90e-03 -3.93e-02  7.15e-03
## 1239  3.03e-02  2.54e-02  1.93e-02 -1.42e-02  1.92e-02  1.84e-02 -2.01e-02
## 1240  2.18e-02  1.85e-02  2.99e-02 -1.09e-02 -8.76e-03 -1.92e-02  6.13e-03
## 1241 -4.24e-04  7.33e-05 -3.36e-04 -1.87e-04  1.00e-04 -5.27e-04 -1.66e-04
## 1242 -1.75e-02 -2.02e-03 -1.41e-02  4.03e-02 -1.75e-02 -4.35e-03  4.80e-03
## 1243  2.83e-02  2.17e-02 -2.00e-02 -9.97e-03 -5.80e-03  1.03e-02 -1.76e-02
## 1244 -7.16e-03 -1.40e-03  2.28e-03  1.53e-02 -6.29e-03 -1.42e-03  1.22e-03
## 1245  2.63e-02  2.32e-02 -1.15e-02  2.23e-02  4.50e-02  3.19e-02 -3.81e-02
## 1246 -2.49e-02 -4.11e-03  7.57e-03 -8.83e-03  2.79e-03 -2.35e-02  4.08e-04
## 1247  1.83e-02  1.14e-01  9.61e-03 -6.53e-02 -2.28e-02  7.26e-02  1.44e-03
## 1248 -8.68e-03 -6.54e-04  8.09e-03 -3.91e-03  8.61e-03 -1.52e-03 -1.33e-02
```

```
## 1249   1.84e-02   1.55e-02  -1.38e-03  -6.12e-03   1.57e-02  -1.73e-02  -1.23e-02
## 1250  -5.18e-02  -4.00e-02  -2.92e-02  -1.05e-01  -2.08e-02  -3.15e-02   2.15e-02
## 1251   2.71e-02   2.64e-02  -8.56e-03  -4.77e-02  -2.78e-04  -6.65e-03  -1.52e-03
## 1252   4.86e-05  -1.03e-02  -9.29e-03   8.27e-03  -1.51e-02   9.13e-03   1.26e-02
## 1253  -1.37e-02  -1.76e-03  -1.91e-02  -2.26e-02   7.54e-03  -1.67e-02  -3.70e-03
## 1254   7.87e-04   8.18e-04   5.27e-05  -2.97e-04  -2.68e-04   4.72e-04   4.21e-04
## 1255  -2.22e-03  -1.82e-03   1.09e-03   3.63e-04   1.50e-03   1.73e-03  -1.33e-03
## 1256  -4.44e-02  -3.66e-02   1.15e-02   1.64e-02   6.36e-02  -5.50e-02  -4.12e-02
## 1257  -2.23e-02  -2.55e-03  -7.62e-03   2.16e-02   1.10e-02   1.20e-02  -1.83e-03
## 1258   6.58e-02   2.37e-03   8.20e-03   2.36e-02   1.36e-01   1.70e-02  -9.80e-02
## 1259  -2.59e-03  -2.72e-02  -1.88e-02   1.67e-02  -1.68e-03   2.19e-02   1.10e-03
## 1260  -1.22e-03  -2.08e-04   4.55e-04  -1.85e-03  -5.32e-04  -4.34e-04   5.74e-04
## 1261   8.93e-03   8.83e-03   6.94e-04  -3.15e-03   7.53e-03   4.70e-03  -2.28e-03
## 1262  -3.77e-02  -5.49e-03   8.49e-03   8.16e-02  -7.10e-03  -3.81e-02   2.08e-02
## 1263   4.63e-02   2.46e-03  -6.25e-02  -4.53e-02  -2.34e-02   1.26e-03   1.11e-02
## 1264   9.54e-04  -1.31e-02   5.00e-03  -2.08e-03   5.69e-03   5.57e-03  -3.31e-03
## 1265  -2.25e-03   1.14e-04   8.82e-04   2.40e-03  -1.02e-03   3.37e-03   1.12e-04
## 1266   7.83e-04   1.44e-02   1.34e-02   3.51e-03   1.80e-02  -6.01e-03  -2.06e-02
## 1267   5.31e-04  -9.43e-03  -7.04e-03  -1.25e-03   1.76e-03   8.12e-03  -6.82e-04
## 1268  -4.61e-04   4.39e-03   4.20e-03   1.34e-03   3.20e-03   5.44e-04  -5.30e-03
## 1269  -1.46e-02   2.71e-03   3.43e-03   1.34e-02  -2.06e-02  -1.50e-03   1.93e-02
## 1270   5.62e-03   4.25e-03  -6.13e-03  -1.10e-03   5.68e-03  -5.37e-03  -3.78e-03
## 1271   1.95e-02   1.61e-02   2.42e-02   4.05e-02  -5.30e-03  -1.84e-02  -6.12e-04
## 1272  -5.37e-02  -4.47e-02  -8.86e-02   3.06e-02  -1.61e-02  -3.70e-02   1.80e-02
## 1273  -2.85e-03  -5.57e-05   3.93e-03   3.39e-03   3.93e-03  -5.42e-04  -3.47e-03
## 1274   4.87e-02   1.73e-03   2.30e-02   1.65e-02   3.10e-03  -7.53e-02  -3.85e-04
## 1275  -1.71e-02  -3.50e-03  -2.10e-02   1.74e-02  -3.28e-03  -2.30e-02   8.83e-03
## 1276  -2.16e-03   2.85e-04   2.50e-03  -7.93e-04   3.87e-03  -7.99e-04  -5.79e-03
## 1277  -1.56e-02  -1.46e-03   1.55e-02   1.59e-02  -2.22e-02   1.12e-02   1.84e-02
## 1278   2.51e-05  -6.33e-03   3.18e-03  -1.77e-03  -2.44e-03  -4.68e-03  -2.36e-03
## 1279  -1.22e-02   3.37e-03  -1.87e-02  -3.69e-03  -2.55e-02   2.45e-02   2.25e-02
## 1280   1.34e-04   8.15e-02   8.28e-02   1.12e-02  -1.79e-02  -3.10e-02   6.14e-03
## 1281  -6.00e-04  -9.67e-03  -6.34e-03  -1.49e-03  -6.19e-03   2.51e-03   1.12e-02
## 1282  -7.26e-02  -5.34e-02   5.19e-02   2.30e-02   6.17e-03   6.30e-02  -4.37e-03
## 1283  -1.61e-03  -5.25e-06  -2.01e-03  -3.43e-03   2.35e-03   2.61e-03  -4.93e-04
## 1284   2.50e-03   2.29e-04   1.89e-03   7.36e-04  -3.77e-04   3.00e-03  -4.90e-04
## 1285   1.38e-02   1.05e-02   3.40e-04  -3.68e-03   1.04e-02  -1.42e-03  -2.05e-02
## 1286   3.43e-02   2.91e-02  -3.16e-02   2.17e-02   2.15e-02   1.43e-02  -3.49e-02
## 1287  -8.29e-03   7.47e-05  -1.39e-02  -2.39e-03   8.37e-03   1.41e-02  -5.93e-03
## 1288  -7.23e-03   1.27e-03  -1.14e-02  -1.63e-02  -7.54e-03   1.51e-02   6.48e-03
## 1289   4.88e-04   2.12e-02   1.86e-02   4.75e-03  -2.85e-04   1.83e-02  -5.27e-03
## 1290  -6.34e-04   5.22e-03   5.93e-03   9.67e-04  -3.92e-03  -2.12e-03   5.10e-04
## 1291   8.09e-02   9.06e-03   8.88e-02   1.84e-02   3.79e-02  -9.53e-02  -3.66e-02
## 1292  -8.19e-02  -7.26e-02  -2.52e-02   2.27e-02   7.90e-02  -1.03e-01  -7.88e-02
## 1293  -4.00e-04  -1.49e-02  -8.46e-03  -2.59e-03  -1.19e-02  -1.05e-02   1.03e-02
## 1294   2.38e-02   2.21e-02   1.38e-02  -1.00e-02   1.12e-02  -2.25e-03  -4.66e-03
## 1295   2.50e-02   2.03e-02  -1.36e-02  -2.95e-02   3.24e-03   9.81e-03  -5.93e-03
## 1296   3.65e-03  -1.98e-02  -1.15e-02  -7.85e-03   2.24e-03  -4.27e-03   4.77e-03
## 1297   2.19e-02   1.78e-02   1.20e-03  -6.35e-03  -1.48e-02  -1.48e-03   3.46e-03
## 1298   5.87e-02   3.95e-03   1.97e-03   1.73e-02  -1.73e-02  -3.00e-02  -2.61e-03
```

```
## 1299  6.48e-02  2.99e-03 -1.07e-02  2.81e-02 -1.65e-01 -4.26e-02  1.71e-01
## 1300 -1.09e-04  1.33e-02 -5.21e-03  2.73e-03 -1.65e-03  9.38e-03  8.58e-04
## 1301  3.55e-03  1.36e-05  5.61e-03  7.76e-03 -1.37e-03  1.90e-03  1.92e-03
## 1302 -1.30e-03  1.52e-02 -6.51e-03  5.00e-03 -1.47e-02 -4.56e-03  9.81e-03
## 1303 -2.00e-02 -4.61e-03 -2.25e-02  4.73e-02  1.42e-02 -7.57e-03 -7.85e-03
## 1304  4.31e-03 -3.01e-02 -2.72e-02  2.07e-02  5.88e-03  9.39e-03  1.05e-02
## 1305 -6.37e-05 -2.01e-02  1.28e-02 -3.27e-03 -9.59e-03  1.73e-02  1.59e-02
## 1306  7.63e-03  2.49e-04  7.98e-04  1.93e-03 -4.95e-03  1.07e-02  3.98e-03
## 1307 -2.17e-02  4.91e-04  6.34e-04 -6.93e-03 -2.59e-02  3.70e-02  7.31e-03
## 1308 -9.71e-03 -8.19e-04  1.03e-03 -3.76e-03  7.98e-03  1.64e-02 -8.19e-03
## 1309 -3.11e-02 -4.83e-03 -1.79e-02  6.43e-02 -1.07e-02 -3.09e-02  3.13e-02
## 1310  1.57e-02  1.32e-02  1.07e-02 -7.42e-03 -1.54e-02 -1.44e-02  1.19e-02
## 1311 -1.45e-02  5.94e-03 -2.05e-02 -4.05e-03  6.32e-03 -5.54e-03 -2.31e-02
## 1312  2.91e-02  2.99e-02  3.98e-02 -1.57e-02 -1.05e-02  1.63e-03  8.04e-03
## 1313  6.72e-02  6.13e-03  6.40e-02  1.24e-01 -3.58e-02 -9.73e-02  4.01e-02
## 1314  4.99e-03  6.28e-02 -2.24e-02 -3.47e-02 -7.02e-03 -5.63e-02 -6.70e-04
## 1315  1.09e-02 -1.01e-03  1.79e-03  5.45e-03  6.24e-03  3.05e-03 -7.01e-03
## 1316 -2.10e-02 -2.38e-03 -6.40e-03 -9.00e-03  5.62e-03  1.09e-02 -5.91e-04
## 1317 -4.40e-03  3.73e-04 -8.44e-03 -9.36e-04 -3.36e-03 -7.29e-03  1.34e-03
## 1318  3.92e-02  3.74e-02  1.50e-02 -1.48e-02  1.35e-02 -2.98e-02 -4.41e-03
## 1319 -2.08e-03 -3.22e-04  2.17e-03 -6.35e-04  3.57e-03 -2.19e-03 -2.41e-03
## 1320  1.65e-02  1.46e-02 -1.09e-02 -5.07e-03 -1.62e-02 -1.44e-02  1.05e-02
## 1321 -3.01e-03  1.29e-05  4.02e-03 -1.75e-03  2.96e-03 -3.70e-04 -1.20e-03
## 1322  2.76e-02  2.10e-02  3.40e-03 -8.34e-03  6.24e-03 -5.15e-03  1.68e-03
## 1323 -2.52e-03  2.13e-02  1.41e-02  2.85e-03  2.00e-02  1.74e-02 -1.27e-02
## 1324  6.01e-04  3.07e-03 -1.70e-03  1.13e-03 -1.08e-03  2.01e-03  8.09e-04
## 1325 -3.10e-03 -2.57e-02 -1.99e-02  3.46e-02  2.97e-03 -6.65e-03 -2.81e-03
## 1326  1.51e-02  1.21e-02 -7.03e-03 -3.47e-03  1.46e-02 -3.32e-03 -1.16e-02
## 1327 -5.26e-02 -4.29e-02  3.34e-02 -3.94e-02 -7.36e-02 -2.47e-02  1.01e-01
## 1328 -6.36e-03  1.54e-02 -1.59e-02  2.17e-02  1.19e-02 -2.22e-02 -1.01e-02
## 1329 -1.40e-02 -2.57e-03  1.88e-02  1.38e-02 -2.06e-02 -2.54e-03  2.25e-02
## 1330 -1.80e-02 -3.15e-03 -1.59e-02  1.61e-02  5.26e-03  8.04e-03 -6.50e-03
## 1331  3.70e-03 -5.82e-04  4.48e-03 -6.84e-03  2.00e-03  2.08e-03  5.90e-03
## 1332  6.79e-04 -2.45e-04  1.48e-03 -1.15e-03 -4.13e-05 -5.91e-04  8.00e-04
## 1333 -3.81e-02 -3.08e-02  1.89e-02 -2.85e-02 -6.58e-03  3.25e-02  1.29e-02
## 1334  6.30e-02 -1.40e-02 -1.21e-02  1.43e-02  1.89e-01 -6.36e-02 -1.65e-01
## 1335 -2.69e-02 -1.92e-03 -1.39e-02  2.95e-02  5.46e-02  4.52e-02 -4.67e-02
## 1336  3.62e-05  2.12e-03 -1.42e-03  4.32e-04  1.80e-03  1.45e-03 -1.69e-03
## 1337  2.95e-03  2.82e-04  4.85e-03 -3.87e-03 -3.59e-03  4.46e-03 -7.21e-04
## 1338 -1.32e-02 -1.19e-03 -5.98e-03 -4.67e-03  3.12e-03  8.93e-03 -4.47e-03
## 1339 -7.88e-02 -6.30e-02  7.00e-02  2.26e-02  4.44e-02  6.87e-02 -4.40e-02
## 1340 -4.99e-02 -4.12e-02  2.39e-02  2.57e-02 -6.11e-04 -3.00e-02  5.22e-03
## 1341 -1.61e-02  1.99e-03  3.27e-03  2.34e-02 -5.59e-03 -2.89e-03  5.60e-03
## 1342  1.15e-04 -1.07e-02 -7.39e-03 -2.57e-03 -7.54e-03 -2.24e-03  8.87e-03
## 1343 -1.20e-02  1.71e-03  2.61e-04 -5.51e-03 -1.59e-02 -1.41e-02  5.55e-03
## 1344  2.26e-02  1.96e-02  7.66e-03 -9.33e-03  7.56e-03  2.89e-02  7.14e-03
## 1345 -1.79e-02 -2.56e-04 -9.45e-03 -5.69e-03 -2.01e-02  2.62e-02  2.96e-02
## 1346 -3.26e-02 -2.87e-03  3.05e-02  2.96e-02 -3.22e-02  2.13e-02  2.06e-02
## 1347 -5.02e-03  7.28e-05 -9.06e-03  8.82e-03 -1.28e-04 -8.83e-03 -6.43e-04
## 1348  2.24e-02  1.96e-02 -2.97e-02  2.06e-02 -2.87e-02 -2.02e-02  2.92e-02
```

```
## 1349  4.06e-04 -2.90e-03 -2.76e-03 -2.86e-04  1.92e-03  2.27e-03 -3.29e-03
## 1350 -4.29e-02 -7.22e-03 -4.46e-02  3.79e-02  7.93e-03 -1.08e-02 -1.21e-02
## 1351  1.25e-02  1.01e-02 -1.02e-02 -1.59e-02  1.03e-04 -3.22e-03 -2.19e-03
## 1352 -2.83e-03  1.37e-02 -2.51e-03  4.74e-03 -1.74e-02  1.07e-02  2.26e-02
## 1353 -7.04e-03 -4.30e-04 -2.88e-03 -1.28e-02 -7.10e-03  1.04e-02  7.22e-03
## 1354  4.68e-02 -2.91e-03  4.30e-02 -1.03e-01 -1.09e-02 -7.79e-02 -2.65e-03
## 1355 -1.16e-01 -8.34e-02  8.31e-02  1.57e-02 -3.65e-02  7.05e-02  2.73e-02
## 1356 -2.13e-02 -2.80e-03  3.20e-02  1.93e-02 -8.28e-03  1.41e-02  1.06e-02
## 1357 -2.46e-03 -2.62e-04  1.51e-03 -9.10e-04 -2.46e-03  1.50e-03  3.43e-03
## 1358  8.20e-04 -2.29e-04  7.83e-04  3.35e-04 -2.11e-03 -1.79e-03  2.52e-03
## 1359 -7.02e-04 -2.37e-02 -1.54e-02 -4.06e-03  9.66e-04 -1.85e-02 -4.35e-03
## 1360 -2.12e-02 -1.14e-03 -1.13e-02  2.03e-02  1.74e-02 -2.30e-02 -2.32e-02
## 1361 -3.41e-04 -1.70e-02  3.36e-03 -1.73e-02  1.21e-02 -3.54e-03 -1.18e-02
## 1362 -3.84e-03 -4.59e-04  6.16e-04 -6.54e-03  2.65e-03 -4.52e-03 -8.17e-04
## 1363  2.16e-02  1.95e-02  1.73e-02 -5.19e-03 -6.38e-03 -9.31e-04  8.02e-03
## 1364  1.62e-02  1.37e-02  1.50e-02 -5.69e-03 -4.58e-03 -3.24e-03  3.95e-03
## 1365 -2.56e-02 -2.03e-03  2.09e-02  2.32e-02  7.25e-03 -2.15e-02 -1.49e-02
## 1366 -6.19e-02 -5.34e-02 -5.75e-02  9.14e-02  2.28e-02 -8.39e-02 -2.16e-02
## 1367 -1.66e-02  9.39e-04  2.84e-02  3.84e-02 -3.49e-03  2.11e-04  3.82e-03
## 1368 -1.48e-02 -2.12e-04  2.03e-02 -5.05e-03  3.05e-03  1.11e-02  2.74e-03
## 1369 -2.55e-02 -1.49e-03 -2.88e-02  2.85e-02  5.61e-03 -3.11e-02  6.16e-03
## 1370 -7.21e-02 -6.07e-02  4.50e-02  1.92e-02 -9.53e-02  1.54e-02  1.32e-01
## 1371  9.07e-03 -2.79e-03 -2.33e-03  3.70e-03 -5.07e-04 -7.46e-03 -4.88e-03
## 1372 -4.48e-03  1.52e-03 -7.06e-03  9.81e-03 -6.33e-03  1.18e-02  3.24e-03
## 1373 -1.50e-02 -2.08e-03 -1.41e-02 -4.67e-03 -1.41e-02  2.33e-02  1.44e-02
## 1374 -1.04e-03 -2.66e-02  5.10e-03  1.94e-02 -3.48e-02  1.68e-02  5.65e-02
## 1375 -7.21e-03  1.38e-03 -2.11e-03 -3.31e-03  1.70e-02 -1.21e-02 -2.06e-02
## 1376 -4.43e-02 -4.07e-02 -3.99e-02  7.79e-02 -2.27e-02  6.28e-03  4.71e-03
## 1377 -1.01e-04  3.88e-03  3.23e-04  7.53e-04 -4.82e-03  2.91e-03  3.70e-03
## 1378  2.03e-03 -2.04e-04 -2.48e-03  9.41e-04  9.80e-04  2.50e-03  1.01e-03
## 1379 -1.89e-03 -3.28e-02 -1.08e-02 -6.69e-03 -1.26e-02 -2.48e-02  1.93e-02
## 1380  4.69e-02  3.31e-03 -2.73e-02 -5.00e-02 -2.40e-02 -3.62e-02  2.90e-02
## 1381 -1.55e-02  5.35e-04 -7.31e-04 -4.22e-03 -1.29e-02  2.88e-02  5.24e-03
## 1382  1.71e-02  1.70e-02  1.11e-02 -7.56e-03  5.78e-03 -1.39e-03 -2.31e-03
## 1383 -3.19e-03 -2.96e-02  1.90e-02 -9.80e-03  1.70e-02  3.20e-02 -1.32e-02
## 1384 -1.13e-03  3.26e-04  3.71e-04 -2.67e-03  9.20e-04  1.16e-03 -5.99e-04
## 1385  1.92e-02  1.56e-02  2.05e-02 -9.22e-03 -1.00e-02 -1.04e-02  5.92e-03
## 1386 -3.50e-04  3.36e-03 -2.74e-03  9.63e-04  3.61e-03  5.10e-05 -2.08e-03
## 1387  3.14e-02  2.39e-02 -3.55e-02 -9.98e-03  1.69e-02  3.25e-02 -6.60e-03
## 1388 -2.01e-02 -2.01e-03 -1.89e-02 -6.74e-03 -1.89e-02  2.81e-02  1.31e-02
## 1389  5.45e-04  5.67e-03 -5.43e-03  2.22e-03 -1.27e-03  3.69e-03  1.59e-03
## 1390 -2.26e-02 -2.48e-03  1.50e-02  5.16e-02 -1.65e-02  3.59e-02  1.81e-02
## 1391  1.14e-02  1.20e-01 -1.15e-01 -7.46e-02 -3.68e-02  7.42e-02  1.17e-02
## 1392  4.11e-02  3.56e-02  1.85e-02  3.28e-02  3.22e-02  5.06e-02  1.12e-02
## 1393 -5.56e-03  5.26e-04  2.96e-03 -1.15e-03 -2.91e-03 -6.71e-03  3.09e-03
## 1394  7.72e-04  6.68e-04  5.26e-04 -2.36e-04 -7.83e-04 -6.73e-04  7.03e-04
## 1395  1.41e-02  1.09e-02  3.63e-03  9.24e-03  1.86e-02 -1.10e-02 -2.42e-02
## 1396  5.33e-02  1.38e-04 -9.89e-03  1.35e-02  5.14e-03  5.72e-02 -3.61e-03
## 1397 -6.96e-02 -5.61e-02 -1.10e-02  8.81e-03  1.21e-02 -6.59e-02  9.59e-03
## 1398 -7.86e-03  1.03e-04  5.15e-04 -2.08e-03 -2.00e-02 -2.48e-03  2.08e-02
```

```
## 1399   1.17e-04   3.91e-03  -3.24e-03   7.01e-04   1.28e-05   2.94e-04   3.41e-04
## 1400   2.54e-03  -1.33e-04  -5.51e-03   7.25e-04   6.15e-03   3.10e-04  -4.39e-03
## 1401  -2.42e-02   3.24e-03  -2.55e-02  -6.40e-03   1.95e-02   1.81e-02  -1.08e-02
## 1402  -2.67e-03   1.09e-03  -4.18e-04  -7.88e-03   1.30e-03   2.41e-03  -2.92e-03
## 1403  -5.54e-03  -4.38e-02   3.32e-03   6.29e-02  -1.62e-02  -2.67e-02   1.84e-02
## 1404   3.09e-02   2.41e-02  -1.18e-02  -1.15e-02  -2.29e-02   2.99e-02   1.37e-02
## 1405   1.00e-02   1.03e-02   1.06e-02   5.37e-03  -1.95e-03  -6.17e-04   1.05e-02
## 1406   9.87e-03  -3.48e-04  -1.09e-02   5.65e-03  -2.58e-03   1.84e-03   7.18e-03
## 1407   4.60e-02   3.69e-02  -1.42e-02  -9.86e-03  -3.65e-02   4.84e-02   3.29e-02
## 1408   2.86e-02   2.47e-02   2.16e-02   2.27e-02  -3.50e-02  -2.24e-03   2.56e-02
## 1409   1.06e-02   8.61e-03  -6.98e-03  -4.70e-03   6.20e-03  -1.27e-02  -3.52e-03
## 1410  -6.13e-03   1.14e-04  -3.13e-03  -2.83e-03   1.73e-03  -2.20e-03  -1.52e-03
## 1411  -9.16e-04  -5.14e-05  -1.24e-03  -2.06e-04  -1.23e-04   4.11e-04   5.10e-04
## 1412  -1.53e-02  -3.22e-03  -9.11e-03  -5.03e-03   1.48e-03   5.52e-03   3.23e-03
## 1413   1.29e-04   1.71e-07   5.48e-05   3.96e-05  -2.02e-04  -7.35e-05   1.07e-04
## 1414  -3.25e-03  -3.13e-02   6.82e-03  -7.31e-03   2.27e-02  -4.51e-03  -1.81e-02
## 1415   2.10e-02   1.47e-02  -1.02e-02  -3.76e-03  -8.20e-03  -3.73e-03   1.45e-02
## 1416  -8.95e-04  -1.36e-02   2.83e-03   8.92e-03  -4.55e-04  -7.33e-04   2.61e-04
## 1417   5.98e-03  -1.37e-03   8.40e-03   1.94e-03   6.77e-03  -4.97e-03  -1.21e-02
## 1418  -1.02e-02  -1.09e-03   7.81e-03  -3.64e-03   5.98e-03  -2.07e-03  -5.46e-03
## 1419  -2.59e-02  -4.16e-03  -7.76e-03   2.59e-02  -1.23e-02  -7.61e-03   1.32e-02
## 1420   1.29e-03  -3.84e-02   4.00e-02  -8.81e-03  -1.35e-02   4.19e-02   1.05e-02
## 1421   3.92e-03   4.56e-04   2.14e-03   1.88e-03  -3.08e-03   4.85e-03  -1.83e-04
## 1422   6.91e-03  -3.52e-03   1.65e-02   2.25e-03  -7.18e-03  -6.40e-03   1.49e-02
## 1423  -1.85e-02   1.14e-03   2.43e-02  -5.71e-03   1.15e-02  -3.30e-03  -6.58e-03
## 1424   1.28e-02   1.08e-02   4.46e-04  -6.32e-03   1.09e-02  -4.11e-03  -9.08e-03
## 1425   8.72e-03   7.16e-03   5.22e-03  -1.87e-03  -3.55e-03  -6.43e-04   3.55e-03
## 1426  -2.40e-02  -1.14e-03  -4.19e-02  -1.35e-02  -2.70e-02  -3.44e-02   3.22e-02
## 1427   4.53e-02   3.44e-02   3.25e-02   2.98e-02   3.10e-02   2.42e-02  -1.84e-02
## 1428  -9.55e-03  -1.43e-03  -7.31e-03  -3.44e-03   2.36e-03  -1.17e-02   1.98e-03
## 1429  -2.12e-02  -4.41e-03  -1.02e-03   1.94e-02   1.86e-03   1.08e-02   4.78e-04
## 1430   1.68e-02   1.32e-02   8.77e-03  -5.08e-03  -9.10e-03  -1.61e-02   1.86e-02
## 1431   4.62e-04  -3.19e-06   9.57e-04  -1.47e-03  -1.08e-03   2.38e-04   1.19e-03
## 1432   7.07e-03   2.96e-04  -5.55e-03   3.75e-03   2.05e-03   8.56e-03   7.21e-04
## 1433  -3.97e-03  -8.13e-05   5.50e-03  -9.86e-03   9.41e-03  -5.50e-03  -1.20e-02
## 1434   2.86e-04  -3.91e-02  -2.29e-02  -6.65e-03  -3.07e-02  -4.81e-03   2.32e-02
## 1435   7.62e-04  -4.52e-03   4.95e-03  -1.82e-03   6.35e-03  -3.18e-03  -2.76e-03
## 1436   3.83e-02   3.20e-02   3.18e-02  -1.04e-02   1.25e-02  -2.60e-02  -4.22e-03
## 1437   4.74e-02   4.24e-02   1.77e-02  -2.00e-02   5.98e-03   6.60e-02  -5.38e-03
## 1438  -3.09e-03  -3.16e-03   3.46e-03   1.81e-03   1.38e-03   3.20e-03   2.39e-03
## 1439   6.90e-02   1.04e-02  -9.09e-02   2.69e-02   1.37e-02  -9.56e-02  -1.16e-02
## 1440  -4.89e-03  -4.90e-04  -8.38e-03   5.64e-03  -1.25e-02  -6.34e-03   9.79e-03
## 1441  -1.14e-03  -9.08e-03  -8.56e-03  -1.72e-03  -2.32e-03   2.52e-03   5.82e-03
## 1442  -6.02e-03   2.70e-02  -8.17e-03   6.63e-03  -9.50e-03   2.19e-03   7.52e-03
## 1443   5.96e-02   6.92e-03  -8.95e-02   2.39e-02  -9.86e-02   6.17e-02   9.53e-02
## 1444   3.64e-03  -4.85e-05  -1.79e-03   1.45e-03   2.19e-03   1.23e-03   1.87e-03
## 1445   5.57e-02  -4.45e-03   2.09e-02   1.44e-02  -7.21e-02   3.28e-02   1.90e-04
## 1446  -7.15e-03   1.82e-04   3.52e-03   8.40e-03  -7.32e-03   6.16e-03   3.02e-03
## 1447  -2.71e-03  -2.10e-04  -4.71e-03   3.77e-03   1.08e-03  -1.23e-03  -2.09e-03
## 1448   2.18e-05   6.07e-04   5.36e-04  -8.25e-04   2.22e-05   4.56e-04  -1.82e-04
```

```
## 1449    4.19e-05 -4.73e-03   1.55e-03   3.37e-03   5.34e-03   1.70e-03 -5.26e-03
## 1450    2.32e-02   1.92e-02 -1.00e-02 -7.73e-03   5.07e-03   2.71e-02 -2.44e-03
## 1451    3.51e-02   3.08e-02   4.36e-02 -1.20e-02 -3.41e-02 -2.61e-02   1.41e-02
## 1452    7.48e-04   5.53e-05   1.34e-03   1.44e-04   3.60e-04   1.12e-03 -3.59e-04
## 1453   -9.75e-03   1.13e-01   9.93e-02   1.86e-02 -2.51e-02   2.03e-02   2.33e-02
## 1454   -9.45e-03   2.21e-04 -1.87e-02   1.23e-02 -5.83e-04 -1.30e-02 -2.04e-03
## 1455    1.57e-02   1.27e-02   8.29e-03 -5.19e-03 -8.86e-03 -1.69e-03   7.49e-03
## 1456    2.28e-02   1.84e-02   1.12e-02   1.74e-02   1.20e-02 -2.92e-03 -4.96e-03
## 1457   -2.65e-02   1.78e-03 -1.69e-02 -1.08e-02 -7.87e-03 -4.09e-03   9.48e-03
## 1458    1.14e-03   1.49e-05   1.71e-03   3.27e-04 -7.44e-04   5.39e-04 -1.02e-03
## 1459   -1.52e-02 -3.26e-03   9.17e-04   3.11e-02   8.68e-03 -1.51e-02 -6.19e-03
## 1460   -2.68e-02   7.21e-05   2.37e-02   2.69e-02 -3.49e-02   1.91e-02   3.88e-02
## 1461    4.34e-02   3.46e-02 -8.15e-03   3.40e-02   4.24e-02   4.97e-02 -4.23e-02
## 1462   -3.47e-03   8.05e-02 -7.50e-02 -5.19e-02 -1.68e-02 -8.22e-02   1.86e-02
## 1463   -1.02e-02   4.91e-04   2.20e-03   1.09e-02 -2.31e-02 -1.35e-02   2.00e-02
## 1464    1.61e-02   1.51e-02 -4.03e-03 -7.68e-03   2.92e-02   1.96e-02 -3.43e-02
## 1465    2.19e-02   1.86e-02   3.09e-02   1.52e-02   1.26e-02 -8.04e-04 -7.76e-03
## 1466   -4.53e-03 -2.85e-04   4.82e-03 -7.20e-03 -7.06e-03 -4.33e-03   1.03e-02
## 1467   -1.74e-03   2.62e-05   2.21e-03   2.19e-03 -1.27e-03   3.08e-03 -3.75e-04
## 1468   -2.36e-02 -2.67e-03 -2.11e-02 -4.08e-02 -1.11e-02   1.25e-02   3.38e-03
## 1469   -3.38e-03   2.98e-04   4.87e-04   4.50e-03 -4.36e-04   2.52e-03   2.04e-03
## 1470   -1.50e-04 -6.14e-06 -1.13e-04 -2.77e-04 -2.14e-04 -5.96e-05   1.89e-04
##         dfb.OvT1   dfb.PrSH   dfb.TtWY   dfb.WrLB   dfb.YrAC   dfb.YICR   dfb.YSLP
## 1       8.96e-02 -6.43e-02 -6.68e-02 -1.35e-01 -3.13e-03   1.77e-02 -3.95e-02
## 2       5.56e-03 -1.85e-02   1.29e-02 -1.92e-03 -3.54e-03 -4.71e-03   9.86e-03
## 3       7.42e-02 -2.40e-03   1.62e-02   2.20e-02 -9.48e-03 -1.79e-02   9.11e-03
## 4      -3.57e-02   2.92e-02 -6.43e-03 -7.36e-03 -2.27e-02 -3.94e-02 -2.09e-03
## 5       8.31e-03   1.68e-02 -1.28e-02 -6.61e-03   9.99e-03   1.55e-03 -1.03e-02
## 6       8.68e-03   7.24e-03 -3.32e-03   1.35e-02   8.38e-03 -1.25e-02 -1.55e-03
## 7      -2.62e-02 -2.26e-02   5.17e-03   1.44e-02 -6.04e-03   8.53e-03   1.88e-04
## 8       5.68e-03 -1.24e-02   5.54e-03 -3.15e-03 -4.38e-03   5.06e-03 -9.71e-04
## 9       1.13e-02 -2.44e-02   2.26e-02 -1.90e-03   7.16e-03 -9.39e-03   1.65e-02
## 10      4.75e-03   5.35e-03 -1.25e-02   7.06e-03   1.37e-02 -3.43e-03 -1.29e-02
## 11      5.00e-03   6.88e-03   1.81e-03 -4.28e-03 -3.84e-03 -3.52e-03   5.73e-03
## 12     -4.65e-02   2.36e-02 -1.02e-02 -8.06e-03   4.61e-03   6.50e-03   3.30e-02
## 13      1.48e-02 -8.72e-03   4.51e-03   1.94e-02 -4.17e-03   1.51e-02 -2.56e-02
## 14      4.35e-03   7.80e-03   4.45e-03 -3.26e-03   7.59e-04   8.78e-04 -2.14e-03
## 15      5.81e-02 -1.46e-02   1.93e-02   1.46e-02   5.68e-04 -8.87e-03 -1.59e-02
## 16      3.34e-03   7.45e-03   5.76e-03 -1.89e-03   7.50e-03 -5.16e-03 -1.19e-02
## 17     -4.28e-02   2.01e-02 -2.71e-03   2.30e-02 -8.15e-03   1.71e-02   1.33e-02
## 18     -1.94e-02   8.15e-03 -2.90e-04   1.25e-02 -3.91e-03   6.64e-03 -1.51e-03
## 19     -2.97e-03   1.35e-03   2.71e-03   2.19e-03   1.59e-02 -4.62e-03 -7.69e-03
## 20     -3.54e-02   2.74e-02   8.50e-03 -9.18e-03   1.82e-03   9.15e-05 -1.08e-03
## 21      1.26e-03 -2.39e-03 -2.72e-04   3.37e-03 -5.21e-05   1.30e-03 -3.53e-04
## 22     -3.72e-02   1.23e-01   3.19e-02   2.27e-02   1.95e-02 -3.86e-03 -3.27e-02
## 23      4.99e-03   1.51e-02   1.15e-02 -4.13e-03   3.96e-03   7.39e-03   1.04e-02
## 24      1.29e-02   5.67e-03   5.60e-05 -5.78e-03 -6.37e-04   6.85e-03 -4.82e-03
## 25     -3.01e-02 -6.39e-02   2.18e-02   2.09e-02   1.34e-03 -1.56e-02   2.24e-04
## 26     -1.24e-02 -2.05e-02 -1.28e-02 -2.37e-02 -2.17e-02   4.65e-02 -1.10e-02
## 27      3.24e-02   3.66e-02   5.74e-03   1.15e-02   9.88e-03 -3.85e-02   2.64e-02
```

```
## 28      4.27e-03   7.46e-03   5.67e-03  -1.47e-03  -4.17e-03  -7.61e-03  -2.01e-03
## 29     -6.64e-04  -5.05e-04   9.85e-04   9.73e-04   1.37e-03  -4.69e-03  -8.80e-04
## 30      8.30e-03   1.10e-02   1.13e-03   1.88e-02   2.33e-02  -5.44e-03  -6.08e-03
## 31      7.80e-03   1.31e-02  -7.35e-03  -4.17e-03   1.13e-03  -9.54e-05  -5.26e-04
## 32     -1.18e-02   5.25e-03   6.79e-03  -1.52e-02  -4.86e-04   5.48e-03   3.12e-04
## 33      1.13e-02   8.02e-03  -1.44e-02  -7.91e-03  -1.73e-02   4.48e-02   8.25e-03
## 34     -6.24e-02  -2.26e-02   2.76e-01   1.58e-01  -5.67e-02  -7.10e-02   1.17e-02
## 35      8.17e-02   1.26e-02   5.67e-02  -4.86e-02   4.66e-03  -3.67e-02   4.18e-02
## 36     -6.66e-03  -6.80e-03  -7.76e-03  -8.03e-03   2.82e-03  -2.17e-03  -8.13e-04
## 37      8.93e-02  -2.44e-02  -1.12e-01   2.72e-02   2.52e-02  -1.79e-03  -1.84e-02
## 38     -9.54e-04  -8.06e-04  -1.19e-03   4.88e-04  -1.82e-04  -3.09e-04   8.68e-04
## 39     -5.80e-02   1.31e-02   3.78e-04  -6.30e-02  -4.95e-04   2.84e-03   2.49e-03
## 40      5.19e-03  -9.49e-03  -2.57e-03  -2.30e-03  -1.39e-03   2.20e-03   1.95e-03
## 41      2.25e-03   2.45e-03   3.15e-03  -1.14e-03  -1.41e-03   1.51e-03  -3.70e-04
## 42      7.20e-03   4.71e-03   5.21e-03  -3.30e-03  -5.45e-03   6.16e-03  -8.26e-04
## 43     -2.43e-02  -4.22e-02  -2.29e-02  -3.66e-02   5.51e-03  -1.98e-02   1.66e-03
## 44      5.64e-03  -8.07e-05   6.14e-03  -5.47e-04   3.60e-03  -9.43e-03   8.54e-03
## 45      5.72e-03  -2.11e-02  -5.58e-03  -1.77e-03  -3.27e-03  -5.35e-03   3.16e-03
## 46     -4.45e-02  -6.80e-02  -9.51e-02   1.10e-02   9.33e-03   1.34e-01   2.35e-01
## 47      6.43e-03  -1.72e-02   7.26e-05  -6.21e-03   6.86e-03   1.07e-02  -3.11e-02
## 48      1.06e-02  -2.48e-02  -9.09e-03  -7.32e-03  -2.68e-03   8.98e-03  -1.04e-04
## 49     -4.18e-02  -3.69e-02   6.75e-03  -1.19e-02   4.63e-03  -4.83e-03   2.84e-02
## 50     -3.67e-03   5.01e-03  -5.26e-03   2.25e-03   2.77e-03  -4.49e-03   2.68e-04
## 51      8.13e-02  -2.54e-02   1.19e-01   1.81e-02  -5.25e-02  -1.54e-02   5.86e-03
## 52      7.10e-02  -2.90e-02  -2.91e-02  -4.48e-02  -1.03e-02  -4.21e-04   2.86e-02
## 53     -3.55e-02  -3.60e-02   2.13e-02   2.13e-02   7.67e-04  -6.39e-04   1.19e-06
## 54     -4.53e-02   1.70e-02   1.55e-02  -9.36e-03   3.44e-03   3.64e-02  -8.71e-03
## 55     -4.46e-02  -2.83e-02   2.48e-03   3.06e-02  -2.71e-03  -3.40e-03   4.09e-03
## 56     -4.94e-02   2.54e-02   1.73e-02  -4.60e-03   4.87e-02  -6.25e-02  -2.17e-02
## 57      7.31e-03  -2.53e-02   2.05e-02   1.74e-02   5.90e-03  -1.35e-02   1.46e-02
## 58     -5.22e-02   6.72e-03   2.31e-02  -1.70e-02   5.90e-03   6.58e-03  -1.67e-02
## 59     -6.62e-03   1.78e-02   2.16e-03  -1.10e-02  -8.19e-03   7.84e-03  -5.51e-03
## 60      4.46e-04  -7.47e-04   1.20e-03  -1.85e-03   1.29e-04   1.02e-04   8.64e-04
## 61     -3.65e-02  -3.58e-02   5.24e-03  -6.88e-03   2.30e-02  -1.13e-02  -2.97e-02
## 62      1.65e-02   2.41e-02   6.26e-03  -1.00e-02   7.92e-03   4.40e-02  -5.35e-02
## 63     -3.92e-02   1.46e-02   2.00e-02   2.21e-02  -9.58e-02   1.09e-01  -6.68e-02
## 64      7.81e-03   1.78e-02  -8.86e-03   1.55e-02  -6.75e-03  -3.93e-02   1.79e-03
## 65     -1.70e-03  -1.46e-03  -2.47e-04   5.12e-04  -1.51e-03   5.43e-03   6.68e-03
## 66     -7.66e-03   1.18e-03   2.21e-03  -2.45e-03  -1.82e-04   6.91e-03   2.71e-03
## 67      1.69e-02   1.80e-02   3.80e-02  -6.18e-03  -9.23e-03  -2.37e-02   2.36e-02
## 68      3.46e-03  -2.76e-03  -1.42e-02  -2.24e-03   5.40e-03   2.85e-03  -3.85e-04
## 69      1.42e-02   1.36e-02   6.39e-03   2.62e-02  -1.94e-03   3.60e-04   2.27e-04
## 70      7.36e-02   2.51e-02  -5.25e-02  -5.33e-02   1.73e-02  -1.89e-02  -3.58e-03
## 71      1.52e-02   2.90e-02  -1.78e-02   2.16e-02   1.82e-02  -7.10e-03   4.18e-03
## 72      1.60e-03  -6.12e-03  -6.91e-04  -1.05e-03  -5.92e-04  -8.48e-05   1.67e-03
## 73      1.13e-02  -1.01e-02   1.67e-02  -5.56e-03  -6.16e-03   1.76e-03  -7.88e-03
## 74      8.48e-04  -1.09e-03   3.50e-04  -7.22e-04  -7.48e-04   2.16e-03   2.34e-03
## 75      2.65e-03   3.73e-03   1.59e-04  -1.71e-03  -9.76e-04   1.97e-03  -1.04e-04
## 76      1.08e-03  -4.22e-03  -4.88e-04  -5.50e-04  -6.04e-04  -3.15e-04   1.81e-03
## 77      6.04e-03   3.73e-03  -1.04e-02  -8.32e-04  -2.41e-03  -3.04e-02   1.72e-02
```

```
## 78    -2.75e-02   5.12e-03 -9.20e-03 -3.09e-02   1.88e-02   5.77e-03   2.11e-03
## 79     7.63e-03   9.16e-03 -4.76e-03 -2.45e-02   2.01e-03   3.16e-03   8.53e-03
## 80    -2.81e-02 -3.40e-02 -1.64e-02 -8.52e-03   1.47e-03   4.99e-03   5.19e-03
## 81    -3.11e-02   1.70e-02 -5.30e-03   2.69e-02 -2.12e-02 -3.96e-02   2.65e-03
## 82     9.47e-03 -1.13e-02   7.21e-03 -6.49e-03 -8.08e-03 -2.29e-03   1.20e-02
## 83     2.44e-04   1.46e-04 -7.53e-04 -1.64e-04   4.86e-04   1.66e-04 -1.38e-04
## 84    -1.89e-02   1.11e-02 -1.23e-02 -3.02e-03   6.76e-03 -1.92e-02   1.60e-02
## 85     4.39e-03   5.73e-06   1.08e-02 -3.74e-03 -6.02e-03   6.82e-03   2.93e-04
## 86     4.65e-03   6.45e-03 -2.60e-02   5.35e-03   7.02e-03 -2.75e-03   3.84e-03
## 87     9.24e-03   6.70e-03 -7.35e-03 -4.07e-03   1.58e-03   5.44e-03 -2.88e-03
## 88    -5.45e-03   1.50e-02 -1.51e-03   3.25e-03   2.11e-03 -3.48e-03 -3.03e-03
## 89     1.91e-03 -4.39e-03 -2.08e-03 -6.32e-04   5.47e-03 -4.12e-03 -9.71e-03
## 90    -4.45e-02   1.30e-02 -1.77e-01   1.39e-02 -4.24e-02   7.66e-02   1.62e-02
## 91     1.11e-02 -3.68e-02   5.78e-03   1.73e-02 -3.40e-02   6.42e-02 -3.35e-02
## 92    -3.89e-02 -5.21e-02   4.10e-02   7.23e-02 -5.05e-02 -5.00e-02   2.52e-02
## 93    -3.46e-02   1.73e-02 -3.10e-03   2.36e-02 -6.42e-04 -1.81e-02   1.31e-02
## 94    -5.44e-02   2.07e-02 -2.56e-02   4.33e-02   5.14e-02 -5.25e-02 -6.64e-02
## 95     5.33e-03 -2.70e-03 -3.74e-03 -3.27e-03   1.97e-03 -6.80e-03 -6.95e-03
## 96     1.62e-03   2.60e-03   2.77e-03   6.07e-03   1.48e-03 -8.82e-04   1.66e-03
## 97     5.79e-03 -1.88e-02   4.41e-03   1.30e-02 -2.25e-03   3.10e-03   2.81e-03
## 98    -4.34e-04 -1.67e-04 -2.74e-04   2.14e-03 -9.17e-05   1.91e-04 -9.68e-04
## 99    -4.19e-03 -1.27e-03   4.81e-03 -4.40e-03   2.94e-02 -6.09e-03 -1.62e-02
## 100    2.16e-03   4.89e-03 -9.73e-03 -8.49e-03   3.02e-03   1.52e-03 -2.19e-04
## 101    8.87e-02   1.09e-01   4.06e-03   2.43e-02   1.12e-02 -9.80e-03 -1.32e-02
## 102    1.31e-02   9.62e-03   1.99e-02 -5.21e-03 -1.12e-02   8.18e-03 -9.72e-05
## 103    5.43e-02   3.06e-02   5.83e-04   1.18e-02   4.16e-03 -1.93e-02   1.58e-02
## 104    2.86e-03   2.84e-03 -6.07e-03 -1.57e-03 -6.55e-04 -1.54e-02   1.06e-02
## 105   -3.88e-03 -2.43e-03   1.62e-02   1.17e-02 -4.79e-03 -4.09e-03   6.03e-04
## 106   -1.06e-02   2.39e-02   2.05e-02   5.53e-03 -3.04e-02 -5.55e-03   3.75e-03
## 107   -3.12e-02 -2.00e-02 -1.29e-02   1.94e-02   2.01e-02   1.51e-02   2.00e-02
## 108    7.36e-02 -4.83e-02 -1.02e-02   8.55e-03   8.25e-03   2.04e-02 -3.37e-02
## 109    6.01e-03   9.95e-03   1.21e-03 -2.89e-03   9.96e-04   1.06e-03 -5.12e-03
## 110    1.41e-02   2.31e-03   1.48e-04 -8.09e-03   2.70e-04   7.54e-03 -4.52e-03
## 111    1.43e-02 -3.64e-02 -2.10e-02   3.50e-02   4.82e-02 -5.22e-02 -8.05e-02
## 112    6.22e-02   8.38e-02 -2.32e-02   9.22e-03   3.20e-03   3.64e-02 -4.69e-02
## 113   -1.46e-02   1.04e-02 -1.57e-03 -3.70e-03   1.53e-02   1.65e-03 -6.91e-03
## 114    8.75e-03   1.39e-02 -1.04e-02 -6.21e-03 -6.11e-03   1.58e-03   1.42e-03
## 115    7.70e-03 -2.65e-04 -1.33e-02 -3.78e-03   3.43e-03   6.35e-03 -1.03e-03
## 116    1.81e-03   2.32e-03   4.80e-04 -7.79e-04   5.97e-04   4.05e-04   2.28e-04
## 117    7.48e-03   1.32e-02   7.69e-03 -2.13e-03   1.42e-02 -2.14e-02 -3.91e-03
## 118    2.58e-04   1.84e-04   5.93e-04 -1.42e-04   2.41e-04 -1.58e-04   2.28e-04
## 119    4.14e-03 -1.20e-02 -2.43e-03 -3.34e-03 -1.33e-03   3.89e-03 -1.07e-03
## 120   -1.59e-02   9.08e-03   3.83e-03 -1.86e-02 -1.85e-02 -1.08e-03   1.79e-02
## 121    1.42e-02 -5.67e-02 -1.31e-02   2.14e-02   3.06e-03 -6.99e-03   2.92e-02
## 122   -1.83e-03 -3.61e-03 -1.62e-03   7.48e-03 -2.61e-03   3.60e-03 -5.19e-03
## 123    8.62e-02   3.32e-02 -1.05e-01   2.85e-02   3.56e-03   1.56e-02   4.48e-02
## 124    3.82e-04   7.83e-04   2.31e-03 -9.26e-05   2.83e-03 -3.02e-03 -3.26e-03
## 125    7.96e-02   3.23e-02   3.41e-02 -5.21e-02 -8.78e-02   3.32e-02   7.68e-02
## 126    1.17e-02 -1.94e-02 -5.63e-03   2.13e-02   3.39e-03 -2.68e-03 -1.79e-02
## 127   -8.58e-02 -4.39e-02   1.94e-01 -6.70e-02   5.21e-01 -1.87e-01   1.31e-01
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## 128    5.77e-02   4.20e-02   1.34e-03  -4.27e-02   2.14e-03  -1.23e-02   6.76e-03
## 129    4.29e-03   1.85e-03  -3.48e-03  -2.29e-03   5.78e-04   3.55e-03  -5.27e-03
## 130    2.10e-03   1.42e-03   1.94e-03   3.91e-03   8.51e-04  -3.81e-03   7.80e-04
## 131    1.78e-02   2.39e-02  -5.06e-02  -1.27e-02   1.51e-02   1.02e-03  -1.05e-03
## 132    9.91e-03   1.47e-02   5.02e-04  -3.63e-03   1.20e-02  -2.23e-03  -6.15e-03
## 133    6.70e-02  -5.02e-02  -3.15e-02   1.38e-02  -2.56e-02  -2.83e-03   2.18e-02
## 134   -1.03e-02   3.16e-03   6.22e-03  -1.83e-03   1.64e-03  -4.46e-03   7.36e-03
## 135    4.46e-03  -1.45e-02  -5.28e-03  -3.34e-03   4.50e-03  -1.78e-03  -6.80e-03
## 136    4.59e-03  -1.12e-02   3.73e-03  -1.94e-03  -1.59e-03  -3.22e-04   1.75e-03
## 137   -3.82e-02  -1.28e-02  -2.39e-03   2.24e-02  -3.88e-02  -1.10e-02  -3.24e-02
## 138   -4.25e-03  -2.62e-03   5.24e-03   1.22e-02   7.44e-05   6.71e-03  -6.51e-04
## 139    1.37e-02  -1.30e-02   4.52e-03  -9.90e-03   1.61e-02   4.57e-03  -1.25e-02
## 140   -2.57e-02  -1.60e-02  -6.46e-03   4.04e-02   5.59e-03  -1.86e-02  -1.10e-03
## 141   -2.62e-02   1.04e-01   4.97e-02   1.09e-01  -2.81e-03   1.12e-02  -3.60e-02
## 142    1.02e-02   1.01e-02   6.56e-03   1.13e-02  -5.15e-03  -1.01e-02   9.45e-03
## 143   -3.68e-02  -3.39e-02  -6.48e-02  -8.15e-03   2.46e-02   4.94e-03  -1.24e-02
## 144    1.34e-02   1.07e-02   3.48e-03   2.60e-02  -4.28e-04  -1.20e-02   1.48e-02
## 145    2.48e-03  -1.67e-03   2.71e-04  -5.53e-03   1.66e-03  -2.32e-03   4.07e-03
## 146    6.71e-03   1.67e-03  -8.77e-03  -2.64e-03   3.26e-03   1.62e-03  -4.92e-03
## 147    1.13e-02   1.27e-02  -2.68e-03  -7.56e-03  -8.67e-03  -2.60e-04   1.55e-03
## 148    9.07e-03   6.22e-03  -2.13e-03   1.45e-02   2.77e-02  -4.17e-03  -1.83e-02
## 149    5.88e-03  -1.56e-02   4.32e-03  -4.89e-03  -8.04e-03   1.66e-02  -9.37e-05
## 150    1.32e-02   6.48e-03  -4.98e-03  -8.15e-03  -1.06e-02   1.32e-02  -4.36e-03
## 151    5.65e-03   9.46e-03  -6.81e-03  -5.13e-03  -1.36e-02   1.37e-02   1.23e-02
## 152   -2.12e-03  -2.08e-03  -4.18e-03   3.62e-04   1.23e-03   4.92e-03  -6.13e-03
## 153   -2.96e-02  -2.23e-02   9.26e-03   4.37e-02   9.89e-03  -1.82e-02  -1.08e-02
## 154   -2.19e-03   3.61e-03   4.56e-03  -1.02e-02   6.16e-04  -1.34e-03  -8.96e-03
## 155    6.97e-03   4.42e-03   1.44e-02  -2.00e-03   7.79e-03  -1.31e-02   1.90e-03
## 156   -6.90e-03  -1.07e-02   6.33e-03   4.41e-03  -1.31e-03   8.76e-04  -2.16e-02
## 157    5.82e-03  -3.15e-03   7.69e-03  -4.00e-03  -9.82e-04   4.97e-03   5.69e-04
## 158   -4.58e-02  -3.50e-02   3.39e-02   2.47e-02  -1.04e-02   1.20e-02   2.23e-03
## 159   -4.44e-03  -1.01e-02  -4.96e-03  -1.01e-02  -1.04e-02   1.30e-02  -9.33e-03
## 160    7.76e-03  -9.15e-03  -1.38e-03  -3.01e-03  -1.81e-03  -1.80e-03   1.56e-03
## 161    5.08e-03  -1.82e-02  -9.86e-04  -3.34e-03   1.17e-03   3.29e-03  -5.54e-03
## 162    4.44e-03  -4.82e-03  -6.03e-03   1.66e-02   3.58e-03   3.81e-07  -3.64e-03
## 163    1.12e-02   1.73e-02  -2.40e-03   3.44e-02  -9.42e-03   3.29e-03   7.50e-03
## 164   -1.30e-02  -2.17e-03   1.93e-02   2.25e-02   2.34e-03  -1.17e-05   2.06e-03
## 165   -3.62e-02   3.23e-03   1.04e-02   2.23e-02   7.75e-04   3.39e-03   3.79e-04
## 166    2.60e-03   2.56e-04   4.45e-03  -9.53e-04   5.91e-03  -4.04e-04  -3.12e-03
## 167    1.45e-03   2.74e-03  -2.20e-03  -1.22e-03   1.72e-03  -2.82e-03   2.29e-03
## 168    8.67e-04   1.46e-03   2.43e-04  -3.33e-04   7.42e-04  -2.20e-03  -2.29e-03
## 169    4.41e-03  -1.71e-02   2.36e-03  -1.79e-02  -1.44e-03   9.31e-03   8.65e-03
## 170    8.04e-03  -1.73e-02  -7.57e-03  -3.73e-03   2.73e-03  -3.76e-03   3.26e-03
## 171   -4.94e-02  -6.09e-03  -1.26e-02   3.10e-02  -2.77e-02   1.05e-02   2.48e-03
## 172   -2.38e-02   6.92e-02   8.13e-03   6.47e-02  -2.46e-03  -1.45e-02   3.62e-03
## 173    2.01e-02   2.13e-02  -3.21e-02   2.79e-02   3.57e-03  -2.97e-02  -4.06e-02
## 174    2.88e-04   8.52e-04  -6.54e-04  -1.27e-04   6.89e-04  -4.06e-04  -5.49e-04
## 175   -2.52e-02   1.72e-02   1.56e-02  -2.84e-02  -3.35e-03  -4.33e-03   9.59e-03
## 176   -2.98e-02  -1.46e-02  -3.30e-02  -1.18e-02   2.08e-02   2.43e-04  -1.13e-02
## 177    5.60e-03   2.43e-03   2.63e-03  -1.61e-02  -3.18e-03   4.92e-03   1.74e-03
```

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## 178    -3.04e-02   9.92e-02   1.77e-02  -6.03e-02   8.00e-03  -2.31e-02   2.67e-02
## 179     4.10e-03  -2.07e-02  -2.30e-03  -1.63e-03  -1.13e-02  -5.12e-03  -2.14e-02
## 180     8.45e-03   1.14e-02   1.54e-02  -5.10e-03  -2.13e-03  -6.96e-05  -8.12e-03
## 181    -3.13e-02  -4.27e-02  -9.47e-03  -8.53e-03  -5.51e-03   5.37e-03   7.72e-03
## 182     1.51e-02   1.82e-03  -1.69e-02  -7.63e-03   2.78e-03   2.89e-03  -2.34e-03
## 183     6.56e-02   7.27e-02  -6.00e-02  -3.82e-02   2.88e-02   1.25e-02  -1.85e-02
## 184     5.23e-03   8.70e-04   1.20e-02   7.81e-03  -2.16e-03  -5.66e-04   3.29e-03
## 185    -2.60e-03  -3.61e-03  -8.86e-03   1.36e-03   2.02e-03  -1.75e-03  -6.84e-05
## 186     1.09e-03   1.10e-03  -3.26e-04  -5.40e-04   2.86e-05  -1.33e-03   1.26e-03
## 187    -5.80e-03  -9.94e-04  -1.21e-02   1.85e-03   1.03e-02  -9.50e-03   9.63e-03
## 188    -9.40e-03  -1.86e-02   1.54e-02   3.44e-03   1.27e-03   2.36e-02  -4.33e-02
## 189     1.93e-03  -1.06e-03   2.08e-03   3.31e-03   1.80e-03  -3.33e-03   3.58e-03
## 190     4.45e-04  -5.62e-04   6.67e-05   1.01e-05   8.72e-05  -1.26e-03   4.27e-04
## 191    -5.75e-03  -1.38e-03  -8.72e-04   5.82e-04   2.38e-02   1.60e-02   1.20e-04
## 192     9.45e-03  -3.55e-03  -6.82e-03   1.70e-02  -4.54e-03  -2.21e-02   1.30e-02
## 193     7.23e-02  -3.27e-02  -2.52e-03   2.07e-02  -1.66e-02  -2.84e-02  -2.30e-03
## 194    -1.24e-02  -8.00e-03  -5.79e-03   3.39e-02   8.32e-03   2.78e-03   3.96e-03
## 195    -7.60e-04   3.64e-03  -1.30e-03   6.93e-04   2.15e-03  -1.79e-03   3.37e-03
## 196    -4.49e-02   2.63e-02   7.17e-03   2.67e-02   6.77e-03  -2.54e-02   2.19e-02
## 197     1.67e-02   2.80e-02  -5.13e-03  -5.60e-03  -1.63e-02   8.95e-03   7.48e-03
## 198    -2.10e-03   2.33e-04   3.43e-06   1.22e-03   1.10e-03  -1.93e-05  -1.89e-03
## 199    -1.56e-03  -6.01e-04   2.70e-03   8.14e-04  -7.44e-04  -1.32e-03   7.10e-05
## 200    -9.17e-04   6.80e-04  -8.47e-04  -2.86e-03  -7.68e-04   1.01e-03  -8.29e-04
## 201     1.54e-02  -2.93e-02  -4.42e-03  -2.41e-03   5.29e-03  -3.64e-03  -1.26e-02
## 202     3.93e-03  -6.00e-04  -5.23e-03   1.01e-03  -1.23e-03   2.20e-03  -1.81e-03
## 203    -3.38e-02  -1.35e-02   1.15e-02  -4.48e-02  -2.17e-02  -3.42e-03  -6.14e-03
## 204    -2.14e-02   5.76e-04  -1.58e-02  -2.63e-02   5.88e-03   2.27e-02  -7.71e-03
## 205     7.20e-02   4.25e-02   9.08e-02   2.60e-02  -2.33e-02  -2.78e-02   6.08e-04
## 206    -4.13e-02   1.40e-01  -3.55e-02  -8.10e-02   8.94e-03  -8.84e-02  -5.89e-02
## 207    -3.07e-02  -8.03e-03  -8.76e-03   2.09e-02  -6.09e-03   8.43e-03  -1.13e-02
## 208     1.48e-02   1.43e-02   9.71e-04  -1.21e-02  -1.51e-02   4.02e-02   8.08e-03
## 209    -3.24e-04  -2.26e-04  -5.87e-04  -1.19e-03   5.53e-05  -2.59e-05  -2.14e-04
## 210    -3.33e-03   1.99e-03   1.57e-03   1.20e-03  -2.36e-03  -1.71e-03  -2.03e-03
## 211    -5.04e-02  -8.25e-02  -2.19e-02  -8.65e-02  -2.08e-02  -7.14e-03   1.24e-01
## 212     1.35e-03  -6.83e-03   5.32e-04  -4.02e-04   2.10e-03  -1.78e-03  -1.70e-03
## 213     9.04e-03   5.39e-03   1.02e-02  -3.00e-03   8.09e-03  -1.25e-02   1.43e-02
## 214     3.50e-03  -3.37e-04   7.97e-03   1.44e-02   4.43e-03  -8.27e-03   1.73e-04
## 215     7.79e-02  -5.12e-02   3.06e-02   1.94e-02   1.02e-02  -2.71e-02  -2.34e-02
## 216    -2.59e-02  -1.43e-02  -6.20e-03  -6.87e-03   1.25e-02   7.07e-03   1.03e-03
## 217    -3.17e-02  -2.72e-03  -1.27e-03  -4.93e-02   2.86e-02   1.52e-02  -3.27e-02
## 218    -4.06e-02  -1.72e-02   2.92e-02  -6.68e-02   1.96e-02  -5.65e-02  -8.44e-03
## 219     2.50e-03   3.37e-03  -3.57e-03  -1.49e-03  -3.60e-03   5.22e-03  -1.00e-02
## 220    -2.46e-03  -1.12e-03  -4.78e-05   1.61e-03   6.23e-04  -3.50e-03  -2.60e-03
## 221    -7.27e-05   2.91e-05   9.94e-05   2.01e-04   1.22e-05   2.07e-04  -7.56e-05
## 222     9.57e-03  -2.44e-02  -7.94e-03  -4.18e-03  -1.84e-03   8.41e-04  -4.81e-04
## 223    -2.42e-02   5.54e-03   2.61e-02  -4.22e-03   2.04e-03  -1.79e-02   2.32e-02
## 224    -8.19e-04  -1.52e-03  -5.06e-04  -2.15e-03  -1.28e-03   6.38e-04  -2.77e-04
## 225     2.02e-03   4.58e-03   1.61e-03  -9.40e-04   1.44e-03  -7.46e-04   1.55e-03
## 226     2.36e-03  -1.29e-03   4.34e-03  -1.36e-03  -1.19e-03   1.34e-03   2.82e-04
## 227     4.77e-03  -3.52e-03  -9.83e-03  -3.24e-03   9.74e-03  -6.84e-03  -5.97e-03
```

```
## 228     4.14e-03   1.94e-03   1.68e-03  -3.96e-04  -4.86e-03  -1.52e-02  -3.65e-04
## 229     2.09e-03   9.13e-04   4.77e-03  -6.19e-03  -7.71e-05  -1.66e-03   5.44e-03
## 230     6.12e-02  -2.79e-02  -8.49e-03  -4.25e-02   1.74e-02   2.14e-02  -1.65e-02
## 231     9.05e-03   2.12e-03   1.85e-02   1.15e-02   2.37e-03  -6.58e-04  -6.87e-03
## 232    -8.11e-03  -1.97e-02  -2.66e-02   7.20e-04  -2.26e-02   3.42e-02   1.88e-02
## 233     3.72e-03  -1.87e-03   8.86e-03   4.97e-03   3.85e-04   1.95e-04  -2.72e-03
## 234    -1.59e-02  -1.86e-02   3.57e-02  -1.93e-02  -2.19e-02  -3.67e-02  -1.32e-02
## 235     8.67e-02  -4.06e-02   2.97e-02  -1.37e-01  -1.15e-02   2.23e-02  -3.72e-02
## 236     7.74e-03   9.16e-03  -2.04e-03   1.10e-03   1.24e-03   9.95e-03  -1.05e-02
## 237    -2.54e-02   9.04e-02   1.08e-01   1.28e-01  -1.28e-02   3.77e-02  -6.01e-02
## 238    -4.54e-02  -2.40e-02   6.54e-03  -4.92e-02  -9.20e-02   9.21e-02  -5.83e-02
## 239     4.86e-03   9.16e-03   8.07e-05  -3.05e-03  -1.82e-03  -3.57e-04   5.92e-04
## 240     6.26e-02  -1.28e-02  -2.15e-02  -1.08e-01  -3.13e-03   7.84e-03   9.11e-04
## 241    -6.04e-04  -2.48e-04  -7.37e-05   4.03e-04   7.09e-05  -2.42e-04   2.08e-04
## 242     6.25e-04  -6.66e-04   8.35e-04  -3.95e-04   9.06e-06   4.74e-04  -5.28e-04
## 243     9.50e-03  -2.97e-03  -2.48e-02   1.14e-02   4.71e-03   7.14e-03  -1.44e-03
## 244     1.19e-03  -8.09e-04   1.69e-03  -9.68e-04   8.30e-04  -1.61e-03  -1.03e-03
## 245    -1.06e-02  -1.06e-02  -1.39e-02   6.45e-03   6.86e-02  -6.17e-02  -2.74e-02
## 246     6.28e-03   7.84e-03   8.05e-03  -2.66e-03   8.95e-03   3.97e-04  -4.67e-03
## 247     6.33e-03   6.33e-03   7.79e-03   9.82e-03   5.00e-04  -4.26e-04   2.32e-03
## 248     2.55e-03   2.64e-03  -2.01e-03  -7.81e-04   4.51e-03  -3.97e-03  -1.64e-03
## 249     1.02e-02   5.40e-03  -3.95e-02   1.47e-02   7.15e-03   7.18e-03   4.52e-03
## 250     4.10e-03  -2.85e-03   6.12e-03  -2.96e-03  -7.01e-04   1.18e-03   2.43e-03
## 251    -4.45e-02  -7.23e-02   8.92e-02   2.11e-02  -5.83e-02  -2.33e-02  -5.87e-04
## 252     1.20e-02  -5.08e-02  -3.76e-03  -5.65e-03  -2.49e-02   2.94e-02  -3.85e-02
## 253     6.72e-03  -1.04e-02  -2.23e-03  -3.70e-03   1.04e-03  -3.84e-03   3.57e-03
## 254    -3.96e-02   1.47e-02   1.27e-02  -1.01e-02   8.06e-04   9.81e-04   8.93e-03
## 255    -1.32e-03  -5.41e-04   1.07e-03   6.46e-04  -4.81e-04  -4.64e-04  -3.64e-04
## 256     5.29e-03   9.92e-03   1.81e-03  -3.45e-03  -2.23e-03   4.13e-03  -6.87e-04
## 257    -4.01e-02   2.69e-02   2.94e-03  -9.86e-03   2.04e-02   3.49e-03  -3.96e-02
## 258    -4.49e-03   1.02e-02  -1.15e-02   2.95e-03   1.90e-02  -1.07e-02  -9.73e-03
## 259     1.08e-03   1.71e-03   3.57e-03   1.40e-03  -1.04e-03   5.64e-04   3.33e-05
## 260    -3.33e-02  -6.03e-02  -9.60e-04   8.11e-02  -1.00e-02   1.49e-02  -1.74e-02
## 261     1.14e-02  -2.22e-02   5.81e-03   3.94e-02  -1.57e-02   1.49e-02   7.32e-03
## 262    -3.71e-03   4.04e-03   4.32e-03   1.90e-03  -5.68e-03   3.32e-03   1.05e-02
## 263     1.11e-02   7.23e-03  -6.65e-03  -2.79e-03  -7.24e-03   1.27e-02   1.16e-02
## 264    -3.94e-02   2.25e-02  -4.36e-02   2.85e-02   7.53e-02  -2.11e-02  -3.60e-02
## 265    -3.03e-02  -6.02e-02   2.24e-02  -1.28e-01  -1.64e-02   7.18e-04   7.89e-03
## 266     8.69e-03  -1.79e-02  -1.71e-02  -6.53e-03   9.96e-03   8.20e-03  -2.60e-03
## 267     8.69e-03  -2.23e-02  -3.07e-04  -1.00e-02  -3.05e-03   4.80e-02  -3.03e-02
## 268     3.09e-04   6.75e-04  -5.98e-05  -2.23e-04  -7.95e-05   4.57e-04   1.86e-04
## 269    -9.79e-03   1.68e-03   5.55e-03  -3.27e-03  -1.16e-02   9.06e-03   4.52e-03
## 270    -4.92e-03  -9.95e-03   1.14e-02   3.16e-03  -9.16e-03   1.07e-02   1.42e-02
## 271    -1.61e-02  -9.98e-04  -1.01e-03  -3.80e-03  -5.33e-02   2.24e-02   2.74e-02
## 272     9.92e-02  -6.24e-02  -1.31e-01  -5.28e-02  -6.16e-02   1.33e-03   1.09e-01
## 273    -4.52e-04   1.35e-03   1.02e-04  -6.20e-04   3.15e-04  -5.17e-04  -2.65e-04
## 274    -1.90e-03  -8.90e-04  -2.33e-03   4.98e-03   1.45e-03   1.82e-03  -1.90e-03
## 275     1.13e-02  -9.74e-03  -4.80e-03  -2.85e-02  -7.82e-03   6.11e-05  -3.51e-03
## 276    -1.67e-02  -6.61e-03  -1.98e-03  -3.89e-03   1.66e-03   2.24e-03   5.37e-03
## 277     5.17e-03  -5.66e-03   9.36e-03   8.51e-03   2.44e-03  -9.75e-03  -1.07e-02
```

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## 278   -5.18e-02 -7.61e-02  2.93e-02 -1.70e-02 -9.79e-03  8.04e-02 -6.37e-02
## 279    8.21e-03 -1.62e-02  6.26e-03  2.97e-02  2.96e-04 -6.87e-03  4.21e-03
## 280   -2.03e-03 -7.21e-04  1.58e-03 -3.88e-03 -1.95e-03 -1.58e-03 -2.80e-03
## 281   -1.35e-02 -1.59e-03  5.07e-03  9.41e-03  7.38e-03 -3.36e-04  3.62e-03
## 282   -1.65e-04  8.83e-04  3.38e-04  4.75e-05  2.33e-04  9.07e-04  5.36e-04
## 283    7.02e-03 -1.03e-02 -2.64e-03  1.57e-02  3.27e-03 -6.07e-03  1.78e-02
## 284   -1.77e-02 -9.55e-03  1.54e-02 -5.09e-03 -2.21e-03 -4.97e-03  1.57e-02
## 285   -7.92e-02  2.51e-02  1.82e-02 -1.28e-02  3.50e-03  6.90e-03 -2.54e-02
## 286   -5.52e-04 -6.86e-04  1.20e-03  2.52e-04  7.75e-04  1.26e-03 -1.59e-04
## 287    5.86e-02  9.05e-02  1.43e-01 -1.14e-01 -3.15e-02 -1.86e-02 -7.68e-04
## 288   -1.37e-03 -5.38e-04  2.97e-04  6.31e-04 -1.12e-03 -2.14e-04  4.09e-04
## 289    7.85e-02 -3.16e-02  1.75e-02  2.60e-02  5.73e-03 -9.47e-03 -7.25e-03
## 290    5.48e-03 -1.18e-02 -1.37e-04 -2.58e-03 -5.42e-03  1.58e-04  3.52e-03
## 291   -5.03e-02  3.57e-02  1.30e-02 -5.34e-03  4.54e-02 -3.71e-03  7.01e-03
## 292    1.10e-02  1.40e-02  2.81e-03 -8.57e-03 -1.44e-03  5.21e-02 -4.07e-02
## 293    1.27e-02  1.61e-02  1.10e-02  1.84e-02  5.09e-03 -1.20e-03 -8.34e-03
## 294    7.84e-02 -4.14e-02  1.61e-03  1.12e-02 -3.20e-02  4.41e-02  8.56e-02
## 295   -4.82e-02  3.07e-02  2.48e-02  3.02e-02 -1.36e-02  6.09e-03  2.15e-03
## 296    6.70e-03  1.51e-03  1.16e-06 -1.67e-02 -2.34e-02  2.28e-02  5.89e-03
## 297   -3.42e-02 -2.87e-02  1.45e-02  1.21e-02 -6.08e-04 -1.77e-02  1.11e-02
## 298    1.47e-03  1.13e-04  1.93e-03  3.26e-03  2.44e-03 -1.85e-03 -2.31e-03
## 299    7.32e-03 -6.42e-03  4.18e-03 -3.88e-03 -3.49e-03  5.07e-03  2.88e-04
## 300    3.61e-03 -3.74e-03  1.76e-03 -1.87e-03 -8.42e-04  3.68e-03 -2.50e-04
## 301   -6.17e-04  1.09e-03 -5.32e-04  1.87e-05  2.92e-03  8.58e-04 -2.27e-03
## 302    1.65e-02  1.97e-02 -4.59e-03 -5.91e-03  1.29e-04  9.25e-03 -4.62e-03
## 303    6.83e-03 -1.51e-02  8.21e-04 -6.22e-03 -7.65e-03  1.55e-02  1.11e-02
## 304    7.76e-04  1.72e-03 -2.18e-04  1.72e-03  2.00e-03 -8.59e-04 -2.53e-03
## 305   -1.17e-02  1.08e-02  2.97e-03 -1.84e-02  2.59e-02  1.19e-02 -1.57e-02
## 306   -3.51e-04 -2.98e-04 -5.54e-06  2.95e-04 -3.21e-04  7.73e-04 -1.23e-03
## 307    1.63e-03  6.98e-04 -1.10e-03  2.87e-03 -4.90e-04 -7.14e-04  2.39e-04
## 308    9.43e-03 -5.24e-03 -1.12e-02 -3.65e-03 -9.53e-03 -2.92e-02  2.19e-02
## 309   -1.95e-02  9.05e-03  1.39e-02 -4.37e-03 -1.42e-03 -2.50e-03  4.83e-03
## 310   -2.80e-02  1.61e-02  5.52e-04 -8.54e-03 -7.38e-03  8.69e-03  9.08e-03
## 311    1.12e-02  2.10e-02 -1.12e-02 -4.64e-03  9.69e-03 -9.21e-03 -2.79e-03
## 312    6.44e-03 -1.26e-02 -9.75e-03 -5.38e-03 -2.64e-02  1.72e-02 -1.14e-02
## 313   -3.50e-02 -1.97e-02  8.72e-03  5.86e-02  1.02e-02 -2.59e-03 -1.47e-02
## 314    5.62e-03  9.06e-03  6.09e-03 -1.63e-03  8.42e-03  3.48e-03 -1.48e-02
## 315   -3.79e-02  2.78e-03  1.75e-02 -6.15e-03 -1.90e-02  1.67e-02 -3.84e-02
## 316    7.71e-03 -1.04e-02  3.61e-03 -3.31e-03  2.75e-03 -9.93e-03  9.43e-03
## 317   -2.88e-02  1.43e-02 -1.67e-02 -8.06e-03  1.61e-02  2.85e-02  1.32e-02
## 318   -4.37e-02 -2.27e-03 -8.83e-02 -6.42e-02 -1.00e-02 -1.20e-01  1.28e-01
## 319   -5.82e-02  3.06e-02  3.88e-03  3.84e-02 -8.20e-03 -1.10e-02 -3.29e-04
## 320   -4.84e-02  3.20e-02 -1.36e-02 -6.14e-03  4.11e-02 -4.40e-02 -6.67e-02
## 321   -3.50e-02  2.27e-02  1.18e-02 -6.09e-03  5.24e-04 -4.75e-03  1.19e-02
## 322   -7.82e-03 -9.58e-03  1.02e-02  3.12e-03 -1.37e-02  9.79e-03 -6.77e-03
## 323    1.35e-03 -5.82e-04 -4.67e-04  3.46e-03  2.15e-03 -3.24e-03  2.85e-03
## 324    7.10e-02 -3.09e-02  6.86e-03 -3.96e-02 -1.43e-02 -4.82e-03  2.20e-02
## 325   -4.11e-03 -4.47e-03  1.76e-03  2.34e-03 -2.79e-03  2.76e-03 -6.02e-03
## 326    5.45e-03 -2.46e-02  8.33e-03 -1.33e-03  1.44e-02 -6.27e-03 -1.63e-02
## 327    1.05e-02 -1.93e-03  1.72e-02 -1.06e-03 -2.57e-02  1.25e-04 -3.37e-02
```

```
## 328     9.14e-02   5.07e-02   4.83e-02  -6.26e-02  -1.22e-02  -3.56e-02   4.97e-04
## 329     1.85e-02   9.84e-03   1.82e-03   3.44e-02  -9.98e-03  -5.28e-02   2.74e-02
## 330    -8.02e-03  -1.18e-02  -3.57e-03   2.32e-03  -1.05e-02  -1.56e-03  -6.82e-04
## 331     7.18e-03   9.88e-03   9.69e-03  -1.41e-02  -1.28e-02  -1.53e-02   1.09e-02
## 332    -3.10e-02   1.05e-02   2.54e-03  -3.31e-03   6.36e-03  -4.81e-03   6.45e-03
## 333     1.31e-02   1.39e-02  -1.90e-02   1.43e-02   9.66e-03  -3.34e-03   8.75e-03
## 334     6.51e-03  -2.48e-03   1.06e-02   1.09e-02   4.44e-04   4.50e-03   1.13e-03
## 335    -3.98e-03  -2.04e-03  -2.13e-03   1.78e-03  -7.64e-03   4.65e-03   1.37e-02
## 336    -4.20e-02  -4.60e-02   4.04e-02   2.72e-02  -4.69e-03  -6.89e-03   1.44e-02
## 337     7.32e-02  -5.14e-02   1.36e-02  -4.75e-02  -3.09e-02   4.93e-02  -4.71e-02
## 338     1.44e-02  -8.80e-03   4.97e-03  -8.89e-03   1.90e-03   4.01e-03  -1.14e-02
## 339     1.13e-03   7.82e-04  -1.59e-04  -1.16e-04  -1.02e-03  -3.14e-03   1.49e-03
## 340     1.47e-03  -2.36e-03   5.29e-04  -9.15e-04   7.59e-04  -2.22e-03   3.73e-03
## 341    -5.43e-03   2.07e-03  -5.28e-03  -6.76e-03   3.73e-03  -5.46e-03  -3.67e-03
## 342    -1.57e-02   3.43e-03   1.22e-02  -2.30e-03   9.27e-03  -1.51e-02   8.56e-03
## 343    -3.15e-02   5.48e-03   1.06e-02   2.12e-02   1.74e-02  -1.37e-02  -1.55e-03
## 344    -3.16e-02   6.01e-03   1.38e-02  -4.09e-03   1.85e-02  -2.03e-02   1.51e-02
## 345     1.79e-04   1.78e-04  -3.63e-05  -1.44e-04  -3.03e-04   5.57e-04   6.88e-04
## 346     7.77e-03   8.86e-03  -2.53e-03   8.94e-03  -3.99e-03   2.89e-03   2.33e-03
## 347    -4.75e-02  -4.96e-04   3.15e-02  -6.88e-03  -3.98e-03  -2.03e-02   8.76e-03
## 348     1.19e-02  -1.97e-02   2.95e-02  -6.28e-03  -3.02e-03   6.97e-03  -2.86e-03
## 349     1.02e-02   6.95e-03   7.07e-03  -5.58e-03   1.16e-02   5.60e-03   1.14e-03
## 350    -1.78e-03  -1.09e-03  -1.86e-03  -3.97e-03   8.32e-04   6.05e-04  -1.78e-03
## 351    -2.98e-02   2.19e-02   2.20e-02  -8.24e-03  -1.13e-02  -3.81e-03  -2.83e-03
## 352     2.71e-03   2.51e-03  -1.41e-03  -2.63e-03  -4.95e-03   1.16e-02   3.18e-03
## 353     1.13e-02  -2.18e-02   5.31e-03   3.72e-02   1.28e-02   2.21e-03   3.84e-04
## 354    -2.45e-02   7.99e-03  -6.40e-03  -6.04e-03   2.11e-02  -7.93e-03  -2.11e-02
## 355    -2.83e-02   1.68e-02   8.24e-03  -2.96e-02   8.11e-03   4.76e-03  -8.62e-03
## 356     1.16e-03  -1.30e-03  -3.07e-04  -5.91e-04   2.52e-03  -6.22e-04  -4.07e-03
## 357     9.16e-03  -3.22e-02  -1.24e-02  -7.26e-03   4.85e-03   7.58e-03  -1.79e-03
## 358     4.45e-02  -2.87e-02   7.02e-03   7.80e-03  -3.65e-03   1.59e-03   3.00e-03
## 359     5.65e-04   1.03e-04   2.74e-04  -2.40e-04  -3.08e-05   4.12e-04   6.67e-05
## 360     1.69e-03   4.86e-03  -1.20e-04  -9.99e-04   3.33e-03  -1.77e-03   6.01e-03
## 361    -5.49e-03  -8.34e-03  -1.44e-03   2.75e-03  -3.07e-03  -9.00e-04  -1.98e-04
## 362    -8.49e-03   3.72e-03  -1.64e-03  -2.53e-03   3.00e-03  -4.00e-03   3.44e-03
## 363     8.37e-03  -4.33e-02  -8.71e-03   2.05e-02   1.44e-04   3.70e-03  -1.02e-02
## 364     7.22e-02  -2.64e-02  -4.87e-02   1.64e-02   2.17e-02  -1.80e-02  -7.02e-04
## 365     4.28e-03  -8.62e-03  -1.70e-02  -2.79e-03   2.27e-03  -2.10e-03   4.21e-03
## 366    -2.76e-03  -2.41e-03  -4.78e-03   8.94e-03   1.52e-03  -3.53e-03  -5.24e-04
## 367    -2.65e-02   3.80e-02  -8.97e-02   1.25e-02  -5.42e-02   3.99e-02   7.90e-02
## 368     1.43e-03   1.67e-04  -1.23e-03  -6.19e-04   1.87e-03  -1.54e-04   2.31e-04
## 369     7.51e-02  -4.81e-02  -4.82e-02   1.71e-02   4.17e-02   3.41e-02  -1.95e-02
## 370    -6.87e-02  -8.55e-03   1.97e-02  -1.40e-02   1.46e-02  -1.44e-03  -2.31e-02
## 371    -3.63e-02   3.73e-03   6.58e-04   1.51e-02   2.25e-02  -2.40e-02   5.52e-03
## 372     1.03e-02  -1.73e-03  -6.24e-03  -5.75e-03  -7.38e-04   4.06e-03  -2.33e-03
## 373     1.36e-02  -2.21e-02  -6.94e-03  -5.41e-03   7.02e-03  -7.23e-04   9.58e-04
## 374     4.55e-04   6.75e-04   9.47e-06  -2.70e-04  -2.61e-04   4.82e-04   2.67e-04
## 375     4.05e-03  -2.09e-03   2.38e-03  -2.20e-03   2.91e-03  -1.10e-03   7.24e-03
## 376     8.92e-03  -2.90e-02  -2.78e-02  -5.08e-03   8.64e-04   1.12e-03   6.41e-03
## 377    -6.49e-03  -1.24e-02   7.60e-03  -9.35e-03  -1.00e-02   9.04e-03  -1.01e-02
```

```
## 378      1.59e-03   1.30e-03 -2.86e-04 -7.21e-04   1.08e-03   2.64e-04 -1.33e-03
## 379      9.95e-02 -4.51e-02 -6.71e-04 -4.98e-02   6.66e-03 -3.08e-02 -2.68e-02
## 380     -1.44e-02   6.10e-03 -1.73e-02 -3.85e-03   1.36e-02 -6.31e-03   2.82e-03
## 381     -2.13e-02   9.83e-03   2.66e-03 -2.48e-02 -6.51e-03   1.06e-02   4.43e-03
## 382      7.24e-03 -1.02e-02   7.77e-03 -3.27e-03 -5.99e-03   6.22e-03 -5.16e-06
## 383     -3.36e-02   1.07e-01   3.23e-02   1.19e-02   1.67e-02   1.20e-02 -4.31e-02
## 384      1.04e-02   1.43e-02 -4.24e-03 -7.78e-03   1.71e-03   1.12e-02 -5.77e-03
## 385      8.42e-03   7.68e-03   1.35e-02   1.77e-04 -3.33e-03 -3.09e-02 -3.36e-02
## 386      6.43e-02   9.34e-02 -7.06e-03   1.51e-02   1.38e-02 -1.90e-02   4.05e-04
## 387      3.43e-03   4.23e-03 -7.74e-03   4.05e-03   3.97e-03   1.33e-02 -1.46e-02
## 388     -1.60e-03 -1.70e-03 -1.87e-03   5.58e-04   5.43e-05   7.19e-04 -5.32e-04
## 389      6.52e-03 -3.67e-03   2.50e-03 -3.94e-03 -6.97e-03   3.22e-03   5.74e-04
## 390     -5.16e-02   2.91e-02 -8.57e-02   3.20e-02   2.94e-02   1.82e-02 -2.49e-03
## 391      2.51e-03   4.34e-03   8.93e-04 -1.46e-03 -1.24e-02   1.23e-03   7.48e-03
## 392      5.29e-03 -1.69e-02 -2.79e-02 -3.36e-03   6.97e-03   5.31e-03 -7.73e-04
## 393      3.12e-03   6.41e-03   2.26e-03   6.64e-03   6.05e-03   2.23e-04   1.26e-03
## 394     -1.81e-03 -6.29e-04 -2.22e-03   1.18e-03 -2.48e-05 -1.11e-03   4.05e-05
## 395      4.00e-03   8.34e-03 -5.30e-03   2.46e-02   7.54e-03 -8.19e-03   6.79e-03
## 396      7.18e-03 -1.01e-02 -3.88e-05 -3.27e-03 -4.96e-05   2.01e-03   2.01e-04
## 397     -2.09e-02   3.57e-03   1.45e-02 -6.78e-03 -1.05e-02   6.63e-03   5.21e-03
## 398     -5.75e-02   3.70e-02   1.11e-02 -9.14e-03   4.94e-03 -1.47e-02   3.84e-03
## 399     -3.68e-02   5.79e-03 -1.73e-02 -7.93e-03   1.51e-02 -2.76e-02 -4.35e-02
## 400      1.03e-02   1.25e-02   3.63e-03 -3.85e-03 -2.68e-03   6.11e-03 -1.22e-02
## 401     -1.98e-02   1.07e-03   1.96e-02 -2.99e-03 -3.69e-02   2.25e-03   2.73e-02
## 402     -2.11e-04 -3.56e-04   1.11e-03 -3.57e-04 -1.00e-03   2.25e-04   4.97e-04
## 403      9.72e-03   2.11e-02   1.30e-02 -5.87e-03   9.26e-03 -1.64e-03 -1.81e-02
## 404     -1.77e-03   1.33e-03 -6.77e-03   7.84e-04   1.96e-03   2.22e-03 -5.91e-03
## 405      5.62e-03   6.38e-03 -1.82e-03 -5.00e-03 -1.04e-02   2.65e-02   3.34e-03
## 406     -2.63e-02 -3.84e-02   4.61e-02   2.10e-02 -2.16e-02   3.11e-03 -1.23e-02
## 407     -1.47e-02   3.07e-03 -2.90e-02 -3.21e-03   1.49e-02 -2.83e-03   7.35e-03
## 408      5.17e-03 -1.25e-02   1.27e-03   8.35e-03   1.99e-03 -9.66e-04   2.03e-03
## 409     -1.10e-02 -8.26e-03   2.94e-02 -2.97e-02 -1.91e-02 -7.50e-03 -3.71e-03
## 410      1.22e-02   2.07e-02 -3.50e-02 -6.95e-03   8.94e-03 -1.05e-02   9.64e-03
## 411      1.11e-02 -2.28e-02 -1.39e-02 -2.84e-03   3.04e-03 -1.09e-02   1.13e-02
## 412      7.17e-03   1.05e-02   8.38e-03   2.70e-02 -3.49e-02   2.20e-02 -1.04e-02
## 413     -5.36e-03 -2.82e-03   8.16e-03 -6.79e-03 -2.32e-03   2.90e-03 -9.03e-03
## 414      4.36e-03   7.06e-03   6.93e-03 -9.64e-03 -1.06e-03 -1.91e-03   4.75e-03
## 415      7.57e-02   8.08e-03   2.06e-02   2.00e-02   2.21e-03 -9.50e-03 -2.35e-03
## 416     -5.14e-02   1.39e-02 -3.42e-02 -6.96e-02   3.95e-03   2.30e-02   4.53e-03
## 417     -2.91e-02 -4.37e-02   2.74e-02 -9.49e-03 -1.52e-02   1.51e-02   1.41e-07
## 418     -1.09e-02 -6.22e-03 -3.26e-02   9.85e-04   6.91e-03   4.85e-02 -5.80e-02
## 419      1.06e-02 -2.67e-02   3.62e-03   3.52e-02 -4.07e-03   1.62e-03   1.80e-03
## 420     -8.66e-04 -3.30e-04   1.79e-03 -3.54e-03 -1.99e-04 -3.67e-04 -3.02e-04
## 421      2.31e-03 -3.83e-03   4.57e-03 -1.70e-03 -4.11e-03   7.97e-03   4.88e-03
## 422     -3.92e-02   7.28e-03   3.95e-02   1.07e-01 -1.21e-02 -3.54e-03   1.00e-02
## 423     -2.53e-02 -4.75e-02   1.17e-02   9.24e-02   1.02e-02 -2.50e-02   6.34e-03
## 424      1.72e-03   5.70e-03   2.29e-03 -1.00e-03   5.38e-03 -2.05e-03 -6.10e-03
## 425      7.85e-03   9.64e-03 -2.76e-02   9.02e-03   1.77e-02   2.09e-03   6.34e-04
## 426      1.13e-02   5.68e-04   4.97e-03 -7.14e-03 -3.89e-02   1.49e-02 -4.08e-02
## 427      3.01e-03   2.60e-03 -8.02e-03   5.98e-03   8.78e-04 -1.16e-03 -5.60e-03
```

```
## 428    7.80e-03 -1.03e-02  1.18e-02 -2.14e-02  7.32e-03 -9.87e-03 -2.95e-02
## 429   -1.29e-03 -1.22e-03  3.96e-03  1.28e-03 -4.07e-04 -3.26e-03 -5.27e-04
## 430    2.72e-03  2.84e-03 -6.38e-03  1.02e-02  5.43e-03 -1.28e-03  1.98e-03
## 431    2.20e-02  5.00e-03  1.07e-02 -8.16e-03  9.38e-03 -9.57e-03 -2.35e-02
## 432    7.35e-03  1.14e-02 -1.56e-02 -4.06e-03  5.16e-03  3.85e-03 -7.28e-05
## 433    1.64e-03  1.91e-03 -4.09e-03 -1.20e-03  1.92e-03  2.83e-03 -2.95e-03
## 434   -2.30e-02 -1.50e-02  8.34e-04 -6.13e-03  9.84e-03  4.01e-03 -1.09e-03
## 435   -5.13e-03  2.50e-02 -4.80e-03  1.53e-02  7.22e-03  1.91e-03 -1.48e-02
## 436    1.06e-01 -6.18e-02  9.48e-03  1.15e-01 -1.13e-01 -7.07e-04  1.07e-01
## 437   -3.84e-02 -4.64e-02  3.26e-02  2.74e-02 -2.50e-02  5.90e-03 -2.61e-03
## 438    1.16e-02  4.60e-03  3.09e-03 -4.46e-03 -1.84e-03  1.53e-03 -1.15e-03
## 439   -2.12e-02  1.17e-02  1.09e-02 -2.53e-03 -1.41e-02 -2.33e-02  1.50e-02
## 440   -3.66e-02 -5.38e-02  3.25e-02  1.73e-02 -3.31e-02 -2.62e-02 -4.46e-03
## 441    6.83e-02 -1.84e-03 -1.58e-02  1.53e-02 -1.89e-02 -3.82e-03 -1.72e-02
## 442    9.25e-03 -5.55e-03 -1.06e-03 -5.97e-03 -7.02e-04 -8.93e-04 -8.25e-03
## 443    6.15e-03  5.00e-03  1.53e-02  1.36e-02  2.19e-03  2.00e-02 -3.08e-02
## 444   -3.59e-02  1.03e-02  1.95e-02  1.62e-02 -2.09e-02 -7.77e-04  1.05e-02
## 445   -9.49e-04 -6.51e-04  9.47e-05  6.06e-04 -1.52e-03  6.71e-04  2.07e-03
## 446    4.48e-03 -1.60e-02 -2.52e-02 -3.24e-03  2.03e-02 -9.75e-03 -1.03e-02
## 447   -2.98e-03 -1.76e-03  2.54e-03  2.26e-03  5.88e-03 -1.05e-02 -6.00e-03
## 448    1.62e-05  4.36e-05 -4.07e-05 -1.10e-05  4.39e-05 -2.77e-05 -3.35e-05
## 449    1.89e-03 -5.96e-04  7.03e-04 -1.44e-03 -4.36e-03  8.45e-03  1.19e-03
## 450    5.70e-03  9.89e-03  2.99e-03 -3.59e-03 -3.91e-03  7.56e-03  8.63e-03
## 451   -3.56e-02  1.24e-02 -4.89e-03 -3.60e-02  9.28e-03 -9.39e-03  1.49e-02
## 452   -3.47e-02 -3.47e-02  3.49e-02  2.66e-02  1.47e-02 -2.30e-02 -8.73e-03
## 453   -4.28e-03  8.50e-03 -8.87e-03  1.29e-02 -2.73e-03  3.58e-03 -4.14e-05
## 454    6.16e-02 -4.97e-02  3.96e-02 -4.96e-02  2.02e-02  8.92e-02 -2.38e-02
## 455   -1.44e-04 -1.52e-04  1.08e-04  3.27e-04 -6.61e-05 -6.69e-05  3.22e-05
## 456   -3.01e-03  7.43e-03 -1.14e-02  2.06e-03  9.24e-04 -8.37e-03 -3.15e-03
## 457    2.28e-03 -4.88e-03  1.73e-03  3.70e-03 -1.54e-04 -2.17e-03  1.90e-03
## 458    5.08e-02 -8.96e-03  3.11e-04  1.08e-02  1.84e-03 -1.02e-02  5.60e-03
## 459    9.82e-03  3.66e-03 -2.62e-02 -5.53e-03  1.73e-02  8.88e-03  2.21e-03
## 460   -4.63e-02 -6.81e-03  1.80e-02 -7.18e-03  1.10e-02 -2.58e-02  3.08e-02
## 461    1.19e-02  1.75e-02 -1.78e-02 -8.04e-03  9.65e-03  8.49e-03 -4.82e-03
## 462    6.76e-03 -4.21e-03  1.79e-02 -3.08e-03 -3.50e-03 -8.72e-03  9.15e-03
## 463    2.37e-03  2.89e-03  6.27e-04 -9.54e-04  9.17e-04 -1.16e-03 -2.44e-03
## 464    4.05e-02  1.91e-02 -1.42e-02 -6.96e-02  5.47e-03 -6.04e-03  2.49e-04
## 465    1.86e-03 -2.06e-03  6.60e-04 -5.82e-03 -1.73e-04 -2.59e-03  1.06e-03
## 466    1.02e-02  1.90e-02 -4.94e-02  1.40e-02  2.89e-02 -1.55e-03 -1.18e-03
## 467    1.28e-05 -6.65e-06  1.19e-05 -1.72e-06  2.18e-05 -8.34e-05 -4.69e-05
## 468    2.00e-03  3.57e-03  7.84e-03 -1.48e-03  3.44e-03  2.80e-03 -9.70e-03
## 469   -1.58e-02  8.34e-03 -2.96e-03 -3.97e-03  1.41e-02 -9.07e-03 -9.19e-03
## 470   -5.28e-02 -8.41e-02 -2.96e-02  3.08e-02  3.58e-02 -4.84e-02 -2.68e-03
## 471    1.42e-02  1.15e-02 -5.59e-03 -5.34e-03  3.65e-03  1.21e-03 -8.77e-03
## 472    1.35e-03 -1.68e-03 -3.55e-03 -9.15e-04  1.09e-03  1.14e-03  9.09e-06
## 473    6.35e-03  9.84e-03  8.35e-03  1.38e-02  2.80e-03 -7.61e-03 -8.51e-03
## 474   -3.59e-03 -2.02e-03  1.69e-03 -1.17e-03 -1.37e-02  3.87e-03  9.58e-03
## 475   -3.49e-02  2.63e-02 -1.42e-02 -9.91e-03  1.38e-03 -9.95e-03  6.18e-03
## 476    7.60e-03 -2.01e-02  4.75e-03 -3.01e-02 -7.08e-04  7.76e-03  2.59e-03
## 477    1.22e-02 -2.78e-02  3.60e-03 -5.49e-03 -8.08e-03  1.16e-02 -7.33e-04
```

```
## 478    9.42e-03   1.06e-02   3.75e-03  -6.65e-03  -7.30e-02   4.82e-02  -8.61e-03
## 479    4.89e-03   1.13e-02  -7.52e-03  -3.81e-03  -1.10e-03   3.14e-03   7.64e-03
## 480    7.15e-02   6.94e-03   2.50e-02   2.01e-02   3.13e-02  -7.12e-03  -9.66e-03
## 481   -2.92e-02   3.75e-02  -3.42e-02   8.51e-02   2.44e-02  -2.82e-02  -3.67e-03
## 482   -4.03e-02   1.59e-02   5.41e-03  -8.37e-03  -2.17e-03  -1.91e-02   9.99e-03
## 483   -4.17e-02   3.48e-02   2.24e-02  -1.52e-01  -2.04e-03  -3.69e-02   1.56e-02
## 484    1.47e-02   1.15e-02  -5.42e-03  -9.46e-03   5.78e-03   1.37e-03   6.42e-03
## 485   -2.62e-03   1.17e-02   7.26e-03   1.10e-02  -8.90e-03   2.92e-03   7.09e-03
## 486    1.01e-02   1.56e-02  -8.03e-03   1.79e-02  -3.30e-03  -1.26e-03   7.96e-03
## 487   -2.79e-02   2.17e-02  -3.42e-02   1.98e-02   5.34e-03   1.22e-02  -2.46e-03
## 488    1.34e-02   1.07e-02  -4.58e-04  -3.55e-02  -7.18e-03   1.20e-02  -1.70e-03
## 489   -2.16e-04  -1.44e-04  -1.93e-04   1.19e-04   6.33e-04  -3.68e-04  -3.86e-05
## 490   -2.83e-02   6.31e-03  -1.49e-02   2.01e-02   2.52e-02   5.07e-03   1.31e-03
## 491    1.56e-02  -1.26e-02  -1.20e-02   2.61e-02   4.61e-03   3.41e-03  -1.40e-03
## 492   -2.24e-02   8.61e-03   1.38e-02  -5.35e-03   1.17e-02  -9.33e-03  -6.44e-03
## 493    3.75e-03   5.45e-03  -9.91e-04   1.26e-02   5.16e-03  -4.30e-04   2.77e-03
## 494    7.93e-03   2.03e-02   7.30e-03  -2.91e-02   7.47e-03  -6.50e-04   3.51e-03
## 495   -3.06e-02  -1.65e-02  -3.24e-03  -1.06e-02  -1.60e-02   2.59e-02   1.55e-02
## 496   -4.56e-02  -7.65e-02   1.07e-02   2.51e-02   2.40e-02   1.02e-02  -2.51e-02
## 497    1.52e-02   2.75e-02  -3.67e-03  -9.16e-03  -2.20e-03   5.13e-03  -3.52e-03
## 498    1.91e-03  -1.08e-03   1.66e-03   2.17e-03  -2.16e-03  -1.67e-05  -4.43e-04
## 499    7.21e-03  -2.03e-02  -6.25e-03  -5.70e-03   5.59e-03   3.15e-03  -1.05e-02
## 500    3.16e-03   3.38e-03   4.09e-03  -1.91e-03  -3.98e-03   6.02e-03  -3.22e-04
## 501   -3.91e-02   2.10e-02   2.01e-02   2.29e-02   1.78e-03  -3.04e-03   1.64e-02
## 502    1.04e-02  -2.01e-02   8.76e-03  -3.68e-03  -5.84e-03   6.50e-03  -5.17e-04
## 503    3.14e-03  -7.21e-03   1.91e-03  -9.27e-03   1.68e-04   3.78e-03  -6.76e-03
## 504    1.81e-03   3.40e-03  -1.63e-03   3.35e-03   3.40e-03  -2.86e-03  -6.05e-03
## 505   -3.18e-02  -2.08e-02  -8.22e-02   1.60e-02   8.50e-03   2.93e-03  -8.50e-03
## 506   -3.15e-02   1.22e-02   5.80e-04  -8.56e-03  -3.38e-03   4.32e-03   4.78e-03
## 507   -4.62e-04   7.49e-06  -1.15e-03   1.89e-04  -6.50e-04  -1.14e-05   1.23e-03
## 508    6.69e-03   2.73e-03   5.94e-03   1.11e-02  -1.38e-02   1.65e-02   2.49e-04
## 509    1.17e-02   1.36e-02  -1.59e-02  -6.48e-03   8.00e-04  -1.83e-02  -4.63e-02
## 510    1.32e-03  -3.44e-03  -9.80e-04   4.22e-03   2.52e-04  -3.02e-03   4.57e-04
## 511    3.19e-03   3.07e-04   4.86e-03  -7.58e-03  -9.20e-04  -5.06e-03  -6.84e-03
## 512   -4.43e-02   3.40e-02  -1.80e-02  -1.27e-02   1.74e-02  -2.00e-04   9.81e-03
## 513    1.33e-02   1.64e-02  -7.78e-03  -9.71e-03  -1.18e-02   2.93e-03  -2.99e-03
## 514    6.99e-02  -5.04e-02   7.95e-03   1.88e-02   3.82e-03  -3.59e-02   2.38e-02
## 515    5.42e-02  -3.65e-02   1.06e-02   1.20e-02  -2.51e-02   2.26e-02   6.69e-02
## 516    3.80e-03  -4.46e-03   5.76e-03  -2.26e-03  -3.92e-03   4.16e-03   5.95e-04
## 517    4.90e-03  -2.87e-03  -9.06e-03  -2.24e-02  -2.80e-03   3.88e-03   2.82e-03
## 518    6.00e-04  -1.93e-03   3.29e-04  -2.24e-04  -1.71e-04   4.17e-04  -1.26e-04
## 519    3.03e-03  -6.16e-03   3.11e-03  -5.73e-04   7.23e-04  -5.81e-03   4.88e-03
## 520    7.95e-03  -9.46e-03  -1.10e-02  -4.45e-03   4.08e-03  -4.60e-03   6.54e-03
## 521    5.74e-04   9.03e-04   3.50e-04  -4.02e-04   6.63e-04   7.34e-05  -4.77e-04
## 522   -1.19e-02  -1.17e-02   2.51e-03  -2.46e-03  -1.20e-03  -3.01e-03   5.31e-03
## 523    3.19e-03  -1.86e-03   3.03e-03  -1.81e-03  -1.96e-03   2.17e-03  -2.99e-04
## 524   -1.30e-02   1.14e-02  -8.32e-03  -6.69e-03  -2.54e-02   5.98e-03   1.06e-02
## 525    6.30e-03   3.42e-03   1.40e-02  -1.85e-02   1.21e-02  -3.02e-03  -1.87e-02
## 526   -2.60e-02  -1.49e-02  -1.04e-02   1.21e-02  -6.26e-03   1.30e-02   4.01e-02
## 527    9.09e-03   1.30e-02  -1.73e-02  -5.24e-03  -1.58e-02   2.21e-02  -2.96e-02
```

```
## 528    9.79e-04  1.25e-03  2.16e-04  1.65e-03 -4.57e-05 -7.41e-04  1.90e-03
## 529    8.53e-02 -2.38e-02  5.83e-02  2.53e-02 -4.59e-02  6.91e-03 -1.28e-02
## 530    2.84e-05  3.40e-05  4.03e-05  5.62e-05  1.59e-05 -3.53e-05  4.48e-05
## 531    6.00e-04  1.42e-03  6.99e-04 -9.46e-05  2.02e-04 -9.22e-04  1.80e-03
## 532    2.68e-03  2.96e-04  4.29e-03 -1.04e-03  7.90e-03 -2.78e-03 -8.44e-03
## 533    4.50e-03  6.36e-03 -1.11e-02 -2.00e-03  8.79e-03 -6.67e-03  4.98e-03
## 534   -2.62e-02 -2.60e-02 -2.53e-03 -2.11e-03 -2.02e-03 -2.53e-02  3.76e-02
## 535   -9.79e-03  1.46e-02  3.83e-02  6.22e-03 -1.44e-02 -1.51e-02 -1.65e-03
## 536    6.48e-03 -1.82e-03  8.87e-03  9.96e-03 -1.54e-02  1.39e-02 -2.16e-02
## 537    1.18e-02  9.69e-03  3.88e-02 -9.89e-03  5.85e-03 -4.67e-04 -1.13e-02
## 538    6.18e-03 -1.58e-02  6.18e-03  1.24e-02  2.42e-03 -6.31e-03  8.47e-03
## 539   -6.51e-03 -6.20e-03 -1.37e-02  1.58e-03  2.29e-02 -1.35e-02 -1.89e-02
## 540    3.25e-03  4.73e-04  7.85e-03 -1.59e-03  1.85e-04  3.26e-04 -1.84e-03
## 541    6.47e-02 -2.43e-02  4.10e-02  1.15e-02 -4.34e-02  3.48e-02  6.23e-03
## 542   -3.84e-04 -5.81e-04 -1.50e-03  1.89e-04 -5.15e-05  1.54e-03 -1.70e-03
## 543   -4.09e-02  3.69e-03  8.80e-03 -4.04e-02  7.38e-03  1.06e-02 -9.55e-04
## 544    1.43e-02  1.94e-02  5.47e-03 -1.36e-02 -7.13e-04  1.28e-02  8.36e-03
## 545   -2.71e-02  9.57e-03 -1.35e-02  1.64e-02 -2.46e-02  8.49e-02 -4.00e-02
## 546    3.42e-03 -1.06e-02 -1.36e-03  5.34e-03  6.00e-03 -1.92e-03 -8.83e-03
## 547    1.21e-02  2.06e-02  1.37e-02 -7.21e-03 -9.30e-03  9.09e-03 -2.27e-03
## 548    7.81e-02 -5.16e-02 -1.54e-02  2.97e-02 -2.26e-02 -5.17e-03  3.29e-02
## 549    8.30e-03 -6.54e-03  1.14e-02 -3.16e-03  5.09e-03  1.68e-03 -3.90e-03
## 550    1.07e-02  2.03e-02 -1.96e-03 -7.72e-03  1.02e-03  2.03e-02 -2.26e-02
## 551    7.83e-03  5.55e-03 -1.11e-02 -2.80e-02 -4.91e-03 -7.83e-04  7.43e-03
## 552    2.77e-03 -2.12e-04 -7.96e-05  1.07e-02 -3.07e-04  3.49e-03 -9.26e-04
## 553   -7.81e-03 -1.11e-02  1.98e-02 -1.19e-02  6.42e-04  1.41e-02 -9.02e-03
## 554   -4.19e-02 -3.77e-02  2.39e-02  2.83e-02 -3.62e-03  9.93e-03 -1.15e-02
## 555    1.21e-02 -2.01e-02  3.43e-04  5.05e-02  1.09e-02 -1.33e-02  2.02e-02
## 556    4.68e-03  1.62e-03  3.31e-03 -2.28e-03  1.02e-03  1.42e-03 -4.42e-03
## 557    6.83e-04 -5.07e-04 -1.61e-03 -3.14e-04  1.04e-03  6.88e-05 -5.91e-04
## 558   -2.22e-03 -4.10e-03  8.62e-03  6.43e-03 -1.93e-03 -2.44e-03  9.82e-05
## 559    8.17e-03  2.68e-03  3.08e-04 -4.63e-03  6.37e-03 -1.20e-02 -2.60e-03
## 560   -3.35e-02  1.26e-02  1.79e-03  5.66e-02  3.16e-03  8.72e-03  1.24e-03
## 561    9.37e-03  3.53e-03  7.78e-04 -4.09e-03  5.18e-03  4.78e-03 -1.80e-03
## 562   -4.67e-03 -6.83e-03  3.17e-03  1.50e-02  3.71e-02 -3.10e-02 -2.57e-02
## 563    9.10e-02 -3.37e-02  3.20e-02 -6.35e-02 -6.11e-02  6.59e-02  7.82e-02
## 564    1.09e-02 -3.16e-02  5.44e-03  1.74e-02 -1.66e-04 -7.73e-03  5.69e-03
## 565    1.38e-02  1.52e-02  3.10e-02 -4.37e-03 -1.35e-02 -3.63e-02 -7.94e-04
## 566    9.30e-03 -1.48e-02  1.87e-03 -6.38e-03  1.11e-03 -1.97e-03  2.31e-03
## 567    6.89e-02 -4.52e-02 -7.29e-02  1.95e-02  4.29e-03  2.39e-02 -1.45e-02
## 568    1.23e-03 -3.64e-03  1.87e-03 -3.06e-04 -1.16e-04 -1.03e-03  7.67e-04
## 569    1.14e-01 -3.53e-02 -4.35e-02  1.91e-02 -8.17e-02 -4.23e-02 -2.84e-02
## 570    2.72e-03  2.30e-03  1.44e-02 -2.80e-03  1.19e-03 -4.06e-03  1.70e-02
## 571   -5.35e-03  3.44e-03 -1.26e-02  3.24e-03  3.98e-03  5.86e-04 -2.04e-03
## 572    1.84e-02  1.05e-02 -1.14e-02 -8.56e-03  1.05e-02 -9.06e-03 -1.66e-02
## 573    9.86e-03  1.40e-02 -1.20e-02  1.75e-02 -8.17e-03 -2.38e-02  9.56e-03
## 574   -3.77e-02  3.10e-02 -1.26e-02 -6.91e-02  4.03e-03  1.13e-02 -5.56e-03
## 575    4.67e-03 -2.02e-03 -8.65e-03 -3.18e-03  1.23e-03  2.53e-03 -5.14e-04
## 576   -2.68e-02  1.99e-02  3.29e-02 -7.45e-03 -7.90e-04  2.23e-03  4.46e-03
## 577    6.89e-03 -1.12e-02  2.45e-03 -2.43e-03 -4.69e-03  3.11e-03 -2.46e-04
```

```
## 578   -4.09e-02   1.37e-02   1.25e-02   2.85e-02   6.62e-04   3.45e-03  -2.91e-02
## 579   -6.38e-02   2.68e-02  -2.35e-02  -1.42e-02  -1.15e-03   2.34e-02   1.05e-02
## 580    1.41e-02   2.71e-02   1.05e-02  -4.21e-03  -4.33e-03  -2.31e-02   1.17e-02
## 581    6.51e-03  -1.53e-03   8.78e-03   1.17e-02  -3.23e-03   2.32e-04   3.41e-03
## 582    7.10e-03  -1.54e-02  -6.72e-03  -3.25e-03   3.76e-03   1.24e-03   2.96e-03
## 583    1.28e-04  -5.62e-04   2.23e-04  -5.22e-05   5.69e-05  -1.11e-04   3.72e-06
## 584    5.36e-03  -4.88e-03   7.61e-03  -2.78e-03  -5.48e-04   2.57e-03  -6.01e-04
## 585    6.86e-03   2.70e-03   9.49e-03   1.00e-02  -1.60e-02   1.84e-02  -2.59e-02
## 586    8.90e-02   8.94e-02  -6.37e-04   2.16e-02   1.56e-02  -3.22e-02   1.15e-02
## 587    7.35e-03   1.53e-02   1.97e-03  -4.20e-03  -3.94e-03   6.57e-03  -1.32e-04
## 588   -4.63e-03   8.59e-03  -8.67e-03   2.94e-03   3.11e-03  -6.20e-03  -6.19e-04
## 589   -7.46e-03   1.98e-03   2.49e-02   3.40e-03  -1.85e-02   1.48e-03  -7.15e-03
## 590    6.81e-02  -4.62e-02  -2.68e-02   1.50e-02   1.62e-02  -1.86e-02  -1.17e-03
## 591   -2.41e-03  -4.97e-03  -1.40e-03   7.01e-03   6.74e-04   4.04e-03  -2.93e-03
## 592   -2.39e-02  -2.15e-03  -3.24e-02   1.24e-02   1.23e-03   3.51e-03  -1.67e-02
## 593   -1.44e-02   1.05e-02   3.08e-03   1.45e-02  -4.51e-02  -3.01e-02   2.32e-02
## 594   -3.28e-04  -1.21e-05  -1.48e-04   1.19e-04   2.66e-04   5.36e-04  -7.52e-04
## 595   -2.36e-03   8.81e-03   3.29e-03   1.77e-03   2.16e-03   1.05e-03  -4.63e-03
## 596    9.46e-02  -3.92e-02   8.26e-02   1.07e-02   1.50e-01   6.51e-02   7.78e-02
## 597    3.49e-03   2.86e-03  -1.70e-03  -1.93e-03   1.61e-03   8.61e-04  -3.19e-03
## 598   -2.04e-02   8.46e-03   1.22e-02  -4.74e-03  -1.09e-03  -2.20e-03   7.44e-03
## 599   -4.18e-02   2.94e-02   1.03e-02  -6.71e-02  -1.41e-02   9.79e-03   3.66e-02
## 600    5.20e-03   5.37e-03  -2.35e-03  -3.83e-03  -3.14e-03   6.22e-03   4.31e-03
## 601    6.05e-04   1.06e-03  -6.84e-04  -1.69e-04   7.13e-04  -2.67e-03  -3.60e-04
## 602    2.24e-02   1.46e-02  -2.56e-03  -1.23e-02   6.13e-03   1.15e-02   1.67e-03
## 603   -4.92e-02  -7.80e-02  -4.43e-02   3.40e-02   2.51e-02   9.09e-03  -4.73e-03
## 604    1.35e-02   7.43e-03   4.41e-02  -7.34e-03  -1.28e-02   5.92e-03   7.03e-05
## 605    7.27e-03   9.64e-03   1.07e-02   1.35e-02   1.32e-02  -8.31e-03  -1.95e-02
## 606    1.95e-02   2.30e-03  -1.84e-02   3.30e-02   1.37e-02  -1.19e-02   4.98e-03
## 607    1.90e-02  -4.16e-03   4.07e-03  -9.47e-03  -9.61e-03   1.15e-02   3.16e-03
## 608   -4.98e-02   6.42e-02  -2.08e-01   1.55e-01  -5.46e-02   4.03e-02   1.33e-01
## 609   -5.27e-02   1.61e-02  -9.26e-02  -8.35e-02   1.07e-02   7.74e-02   1.12e-01
## 610    5.58e-03  -2.14e-02  -6.36e-03  -2.47e-03   2.54e-03   3.88e-03   6.70e-04
## 611   -1.79e-02  -2.64e-03   1.15e-02  -1.95e-03   9.01e-03  -1.23e-02   1.51e-02
## 612    6.60e-04  -1.94e-03  -9.22e-04  -2.02e-03   4.98e-04   1.50e-04   6.98e-04
## 613   -4.73e-02  -3.64e-02   3.18e-04  -6.97e-03   1.65e-02  -1.62e-02  -4.56e-02
## 614    3.26e-03  -4.56e-03   2.62e-03   1.11e-02  -1.08e-03   9.90e-05   1.41e-03
## 615    8.56e-02  -1.97e-02   4.15e-02   1.68e-02  -2.76e-02   4.02e-02  -4.06e-02
## 616    7.76e-04   1.51e-03   3.76e-04   1.43e-03  -6.83e-05   4.16e-04  -2.46e-05
## 617   -2.07e-03  -1.78e-03   1.28e-03  -2.68e-03   3.74e-04  -1.04e-02  -3.23e-03
## 618    9.43e-03   1.01e-02   9.06e-03   1.43e-02  -1.99e-03   5.30e-03  -2.61e-03
## 619    1.32e-02   1.45e-02  -1.68e-02   3.19e-02  -9.77e-03  -1.76e-02   1.15e-02
## 620   -4.61e-04   2.51e-03  -3.41e-04   3.04e-04  -2.21e-04   1.20e-03  -1.52e-03
## 621    2.50e-02   4.25e-02   1.56e-02   3.54e-02  -2.64e-02  -3.52e-02   1.33e-02
## 622   -1.44e-02   3.20e-03  -7.68e-03   9.09e-03   2.57e-04  -1.68e-02   7.79e-03
## 623    4.53e-03   7.19e-03  -1.88e-04   7.40e-03  -1.11e-03   2.44e-03   2.81e-03
## 624    1.14e-02   1.41e-02  -1.71e-02   1.57e-02   4.29e-03  -8.32e-03   9.19e-03
## 625   -2.55e-02  -9.95e-03  -6.97e-02  -9.37e-03   2.70e-02   8.82e-03   8.74e-03
## 626   -2.00e-02   1.05e-02  -5.72e-03  -4.16e-03   6.02e-03  -8.18e-03   9.16e-03
## 627    5.46e-04   6.83e-04  -1.87e-04   9.63e-04  -1.14e-05   7.99e-05   1.15e-04
```

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## 628     2.09e-03 -4.08e-03 -5.54e-03 -4.53e-04  5.83e-04 -4.87e-03  3.25e-03
## 629     6.14e-03 -8.11e-03 -2.73e-04 -2.31e-03  1.14e-03  3.81e-03 -9.96e-05
## 630     5.78e-03  5.68e-03 -7.99e-04 -4.65e-03 -3.05e-03  9.69e-03  3.18e-03
## 631     5.87e-03 -1.57e-02  3.91e-04  2.14e-02  4.16e-03  1.71e-03 -4.92e-03
## 632    -2.84e-02 -4.00e-02 -5.25e-03  1.42e-02 -1.85e-03  2.59e-03  4.16e-03
## 633    -5.43e-02  1.49e-02  8.67e-04 -1.89e-02  1.09e-02  1.69e-02 -2.24e-02
## 634     8.71e-03 -2.75e-02  6.98e-03 -7.54e-03 -8.30e-03 -5.46e-03  1.15e-02
## 635    -4.60e-02 -2.53e-02  5.48e-03 -4.82e-03 -7.31e-03  1.50e-03  1.46e-02
## 636    -9.17e-03 -6.78e-03  7.50e-04 -1.10e-03  6.97e-03 -7.52e-03  3.26e-03
## 637     6.20e-02  5.21e-02  1.86e-02 -3.87e-02  6.65e-03 -9.25e-02  7.85e-02
## 638    -4.29e-03 -5.59e-03  2.65e-06  2.27e-03  2.77e-03 -6.56e-03 -1.30e-03
## 639     6.64e-03  1.02e-02  3.05e-03 -2.23e-02 -6.17e-03  8.78e-03  6.94e-03
## 640     3.37e-03 -7.54e-04  5.93e-03 -2.38e-03 -4.10e-03  1.76e-03  2.50e-03
## 641     5.28e-03 -3.31e-03 -1.00e-02  1.19e-02  1.60e-03  1.06e-02 -8.29e-03
## 642     1.08e-02  5.47e-03  1.64e-03 -2.37e-03 -5.51e-03 -2.49e-02 -9.44e-03
## 643     9.27e-03 -1.64e-02  1.70e-02 -5.75e-03  1.36e-03  3.97e-04 -2.31e-03
## 644    -1.13e-02  4.25e-03 -1.11e-02  6.76e-03  2.95e-03  9.82e-04  5.99e-04
## 645    -2.11e-02 -1.43e-02 -9.45e-03 -6.46e-03 -1.01e-02 -2.71e-03  9.39e-03
## 646     8.49e-02  5.63e-02  1.12e-02  1.99e-02 -1.15e-03 -3.29e-03 -1.26e-02
## 647    -1.11e-03 -6.86e-04  4.49e-03  8.93e-04 -3.21e-03 -2.02e-03  1.36e-03
## 648     2.79e-03 -7.10e-04  8.19e-05 -7.80e-04  1.56e-03 -4.83e-03  1.44e-03
## 649     9.62e-03  2.41e-03 -8.27e-03 -4.71e-03 -7.61e-03 -7.72e-03  7.27e-03
## 650    -5.23e-03  5.02e-03  1.68e-02  1.69e-03 -1.04e-02  7.26e-03 -3.91e-03
## 651     4.33e-03  2.80e-03 -7.22e-04  5.79e-03 -5.19e-04  1.97e-03 -7.33e-04
## 652    -2.04e-02 -2.27e-02  1.71e-02 -4.40e-03  1.20e-02 -4.42e-04 -2.15e-02
## 653    -5.61e-02  2.06e-02  3.67e-02 -1.73e-02 -3.14e-02  8.46e-02  2.88e-02
## 654     4.69e-03  7.35e-03 -1.28e-03 -4.32e-03 -3.63e-02  2.46e-02 -1.82e-02
## 655    -3.57e-03 -6.10e-03  3.41e-03  1.80e-03 -2.30e-03  4.84e-04 -3.36e-03
## 656    -2.26e-02  1.56e-02 -5.08e-03 -2.69e-02 -2.61e-04  1.02e-03  5.60e-03
## 657     5.51e-02  8.07e-02 -3.72e-02 -8.21e-02  8.63e-03 -1.27e-02  2.61e-03
## 658     6.03e-03  4.27e-03 -9.54e-03 -4.84e-03  2.16e-03 -2.95e-04  3.36e-03
## 659    -5.63e-02  2.21e-02  2.22e-02 -1.23e-02 -1.56e-02 -4.57e-02 -5.73e-02
## 660     7.65e-03  4.60e-03  1.24e-02 -4.84e-03 -6.51e-03  2.97e-03  4.26e-03
## 661     7.25e-02 -1.97e-02 -1.48e-01 -5.49e-02  3.22e-02 -1.70e-02 -5.75e-03
## 662     5.46e-03 -1.70e-02  1.69e-02 -1.79e-02 -4.42e-03  5.72e-03 -7.26e-04
## 663    -3.38e-02 -3.15e-02  1.53e-02 -6.65e-02 -1.39e-02  1.01e-02 -1.07e-02
## 664    -5.07e-02  6.39e-02 -6.30e-03 -6.40e-02  2.92e-02 -3.62e-02  8.44e-03
## 665    -1.74e-02 -4.86e-03 -7.94e-03  9.30e-03 -5.09e-03  6.39e-03  3.90e-03
## 666    -3.67e-02 -1.78e-02  5.26e-02  2.42e-02 -1.05e-02  1.90e-03 -1.75e-03
## 667     1.02e-01  6.41e-02  9.87e-04  9.85e-02  3.51e-03 -2.01e-02 -1.36e-02
## 668     7.80e-02 -3.68e-02  8.10e-03 -5.58e-02  2.82e-02  1.08e-01 -2.77e-02
## 669     3.90e-03 -4.60e-03 -3.91e-03 -2.32e-03  2.65e-03  1.36e-03 -4.20e-03
## 670     7.86e-02  8.43e-02  1.07e-02 -1.27e-01 -2.05e-02 -2.38e-03  2.86e-02
## 671     1.13e-02 -2.16e-02  9.95e-03 -5.92e-03 -6.42e-03  1.15e-04 -9.87e-04
## 672     9.57e-03  3.97e-03  1.55e-02 -5.78e-03 -6.27e-03  7.91e-03 -7.68e-03
## 673     9.87e-03 -6.41e-03  8.34e-03 -3.93e-03  6.07e-04 -7.55e-03  1.02e-02
## 674    -6.42e-02  4.39e-02  1.32e-03 -1.47e-02 -2.52e-03 -8.22e-04  1.11e-02
## 675    -2.14e-02  8.51e-03 -1.24e-02 -8.92e-03  1.45e-03  2.40e-02  8.22e-03
## 676     7.99e-03  1.88e-03 -3.02e-02 -2.46e-02  7.55e-03 -1.89e-02 -1.46e-02
## 677    -1.92e-02 -3.46e-02  3.33e-03  3.14e-02 -7.59e-03 -2.04e-04  1.61e-02
```

```
## 678     2.79e-03   4.55e-03 -7.23e-03   4.69e-03 -1.84e-02   1.96e-03   1.17e-02
## 679     3.92e-03 -1.47e-03 -4.79e-03   3.71e-03   1.26e-03   2.20e-03 -4.22e-04
## 680   -5.43e-04 -5.88e-04 -9.08e-05 -9.47e-04   9.30e-04   1.57e-03 -1.03e-03
## 681     1.04e-02 -1.16e-02 -2.66e-04 -5.94e-03 -1.78e-02   2.97e-03   8.90e-03
## 682   -4.69e-03 -5.17e-03 -9.53e-03   1.60e-03 -4.69e-03   1.17e-02 -2.72e-03
## 683     3.41e-03 -8.24e-03 -8.25e-04 -2.72e-03 -3.92e-03   7.93e-03   1.75e-03
## 684     6.49e-02   2.93e-02 -1.42e-02   1.76e-02   1.75e-02 -2.56e-02 -7.65e-05
## 685     1.14e-02   1.54e-02   1.05e-02   2.02e-02   7.46e-03   5.22e-03   1.94e-05
## 686     1.18e-02   1.94e-02   4.27e-03 -2.67e-03   1.38e-02 -2.28e-02   2.53e-02
## 687   -2.63e-02   9.93e-03 -2.26e-02 -5.95e-03   1.28e-02 -1.56e-02   2.85e-02
## 688     1.89e-03 -5.40e-03 -6.16e-03 -1.36e-03   1.62e-03 -1.49e-03   7.33e-04
## 689     5.35e-02 -2.03e-02   7.00e-03   6.03e-02   8.75e-03 -1.82e-02   8.17e-04
## 690   -2.03e-02   5.26e-02   2.96e-04   1.13e-02   1.61e-02 -1.57e-02   3.76e-03
## 691   -3.41e-02   2.62e-02 -2.96e-03   5.85e-02   1.64e-02 -1.53e-02 -4.47e-02
## 692   -3.60e-02   9.11e-03   3.38e-02 -1.22e-02 -9.37e-03   2.35e-03   2.61e-03
## 693     4.61e-03   7.10e-03   4.31e-03 -1.42e-02   9.81e-04 -8.92e-03 -1.14e-02
## 694     1.04e-01 -6.89e-02 -1.34e-02   2.05e-02   8.39e-02 -1.88e-02 -5.01e-02
## 695     9.50e-03   5.44e-03   1.63e-02 -7.00e-03 -7.52e-03   2.54e-02 -1.75e-04
## 696   -3.27e-02 -5.87e-02   4.20e-03 -1.33e-01   4.07e-02 -1.71e-01   1.70e-01
## 697   -3.45e-03 -7.78e-03 -8.78e-03 -8.94e-03 -1.19e-04   4.84e-03 -1.09e-02
## 698     9.91e-03   1.91e-03   3.77e-03 -6.08e-03 -6.34e-03   9.81e-03   2.94e-03
## 699     5.33e-03 -1.79e-03   8.32e-03 -2.71e-03 -9.31e-03   2.61e-03   1.71e-04
## 700   -1.16e-02 -1.60e-03   9.72e-03 -1.83e-02 -3.76e-02   1.14e-02   2.12e-02
## 701   -5.98e-02   1.81e-01 -1.07e-01   2.92e-02   4.29e-02 -3.18e-02 -4.30e-03
## 702   -3.71e-03 -2.46e-03 -4.95e-03   7.95e-03   1.76e-03   1.09e-02   1.85e-02
## 703     6.89e-04   1.22e-03   3.39e-04 -2.17e-03   1.13e-03   1.35e-03 -2.52e-03
## 704   -3.50e-02   1.38e-02   2.13e-02 -5.86e-03 -2.36e-03 -1.84e-03   5.31e-03
## 705   -1.17e-02 -8.81e-03 -9.02e-03   2.77e-03 -9.47e-03   2.33e-02 -2.56e-02
## 706     4.36e-04 -9.01e-04   1.75e-03 -2.54e-04   1.99e-04 -9.40e-04   1.25e-03
## 707     9.40e-02   6.64e-03   9.35e-02 -5.73e-02 -5.95e-02 -2.17e-02 -8.25e-04
## 708   -1.12e-02 -8.58e-03 -4.26e-03 -1.48e-02 -1.75e-02 -3.73e-03   1.13e-02
## 709   -3.88e-03 -7.99e-03   5.40e-03   3.81e-03 -8.96e-03   9.10e-03 -9.78e-03
## 710     7.17e-02   7.25e-02 -4.99e-03   1.17e-02   3.98e-03 -2.04e-03 -1.47e-03
## 711     5.23e-03   9.35e-03   1.60e-02   1.75e-04 -4.41e-03 -1.39e-02 -6.19e-03
## 712     5.90e-02   5.21e-02 -5.99e-03   1.28e-02   1.03e-03 -1.28e-02   5.19e-03
## 713     1.03e-02 -1.11e-02   3.22e-03 -6.41e-03 -2.76e-03   8.08e-04   4.55e-03
## 714   -7.37e-03 -2.42e-03 -3.81e-03   3.82e-03   5.87e-03   2.22e-04 -4.17e-03
## 715   -1.66e-02   3.58e-02   5.15e-02 -2.03e-02 -3.32e-02   7.39e-03 -5.56e-03
## 716   -3.56e-02   1.09e-02   1.86e-02 -4.86e-03 -9.99e-03 -1.80e-02   9.53e-03
## 717   -5.78e-03   5.98e-03 -1.83e-02   1.77e-02 -4.18e-03   3.89e-02 -3.52e-02
## 718     9.11e-03   5.86e-03 -2.57e-03 -5.74e-03   3.95e-03   3.87e-03 -8.25e-03
## 719   -2.08e-02   2.55e-03   1.24e-02 -3.00e-03   2.05e-03 -1.21e-02   1.83e-02
## 720   -2.24e-02 -9.20e-03   2.13e-02 -8.22e-03 -2.06e-02   3.62e-02   1.08e-02
## 721     7.20e-02 -5.42e-02   2.80e-02   2.06e-02   3.26e-02 -6.88e-03 -2.09e-02
## 722   -4.68e-03 -2.25e-03   9.34e-04 -6.30e-04   6.04e-04 -7.21e-03   4.58e-03
## 723     1.02e-02 -5.39e-03   1.41e-02   1.30e-02 -4.04e-03   6.47e-03   2.98e-03
## 724   -1.01e-02 -7.86e-03 -1.83e-02   3.14e-03 -8.73e-03   1.26e-02 -1.74e-02
## 725     8.22e-03 -2.30e-04   1.15e-03 -3.42e-03 -5.51e-05   6.69e-03 -9.69e-03
## 726     6.66e-02   1.12e-01 -2.86e-02 -1.12e-01   2.27e-02 -3.14e-03 -2.01e-02
## 727     8.02e-03   1.06e-02   1.34e-02 -2.31e-03 -1.99e-03 -7.13e-04   7.61e-03
```

```
## 728    7.09e-03   1.77e-03  -7.40e-03  -3.91e-03   7.54e-04   5.00e-03  -2.77e-03
## 729   -7.68e-03  -1.49e-02   3.07e-03   5.24e-03  -5.78e-03   3.98e-03  -1.65e-02
## 730   -4.11e-02   3.10e-02   3.89e-03   3.54e-02  -3.87e-02  -4.80e-02  -5.96e-02
## 731   -3.73e-02   1.69e-02   2.28e-02   2.60e-02   1.42e-02  -2.08e-02   1.81e-02
## 732    5.47e-02   9.02e-04  -2.40e-03   1.12e-02   1.17e-02  -1.62e-02   2.64e-03
## 733   -2.96e-02   2.64e-02  -6.25e-03   1.17e-02   2.82e-03   8.75e-04   1.33e-03
## 734   -6.75e-03  -8.24e-03   2.07e-03   1.95e-03   4.34e-03   1.13e-02  -6.65e-03
## 735    1.78e-02   1.53e-03  -1.47e-02   4.03e-02  -6.11e-03  -1.55e-02   3.41e-03
## 736    1.09e-02   1.34e-02  -3.91e-02  -7.56e-03   2.81e-02  -2.47e-03  -1.26e-02
## 737    6.86e-04   4.13e-04  -1.73e-03  -3.12e-04   4.68e-04  -1.60e-03   5.36e-04
## 738    7.41e-03   2.86e-03   5.55e-03  -2.52e-03   3.34e-03  -7.91e-04  -5.71e-03
## 739   -3.61e-04   2.66e-04  -9.75e-05   1.46e-04   9.47e-04  -1.09e-03   1.07e-03
## 740    3.71e-03  -6.23e-03   3.57e-03  -2.78e-03   4.09e-04   3.40e-03  -4.84e-03
## 741    4.94e-03  -8.64e-03   6.69e-03   6.62e-03  -1.60e-03   1.01e-03  -1.05e-03
## 742   -6.29e-03  -4.02e-03   3.84e-03   1.41e-02  -1.13e-02  -4.99e-03  -1.23e-03
## 743    4.32e-03  -4.23e-03   3.08e-03  -3.85e-03  -2.25e-03   3.76e-03  -2.63e-04
## 744   -2.76e-02   1.09e-02  -3.31e-02  -6.97e-03   3.27e-02   1.22e-03  -1.70e-02
## 745   -3.24e-02  -8.67e-03   8.70e-02  -1.25e-01  -2.99e-02  -1.78e-02  -4.72e-04
## 746   -4.03e-02   1.13e-02  -1.80e-04  -1.02e-02   3.53e-02  -1.69e-02  -2.70e-02
## 747   -3.79e-03   1.62e-02  -1.43e-02  -8.27e-04   1.57e-03   2.47e-02  -1.09e-02
## 748   -4.28e-02   2.52e-02  -7.04e-02  -1.38e-02   2.32e-02   1.09e-02  -2.01e-03
## 749   -1.95e-02   2.57e-02   2.00e-02   8.77e-03  -3.55e-02   1.54e-03   2.02e-02
## 750   -4.91e-02   4.51e-03  -2.16e-02   1.50e-02   2.97e-01   4.89e-02  -1.36e-01
## 751   -2.06e-03  -8.78e-04  -6.74e-04  -5.40e-04   3.28e-03  -9.17e-04  -3.35e-03
## 752   -1.10e-02  -1.94e-02   4.76e-03   8.71e-03   2.73e-02  -2.54e-02  -5.05e-02
## 753   -3.23e-02   1.16e-02   1.14e-01   2.87e-02  -1.08e-01   3.92e-02   2.40e-01
## 754   -4.91e-02   1.50e-02  -4.93e-03  -1.41e-02  -1.02e-01   4.69e-02   5.66e-02
## 755    8.76e-03  -1.43e-02   8.22e-03   1.80e-02   4.81e-03  -3.16e-04  -9.75e-03
## 756   -1.07e-02  -7.35e-03   1.58e-02   2.29e-02   6.70e-03  -6.03e-03  -8.06e-03
## 757    6.76e-03   1.25e-02  -8.34e-03  -4.54e-03   1.18e-02  -4.72e-03  -1.73e-02
## 758   -4.00e-03  -5.67e-03   3.05e-03  -4.91e-03   1.15e-02  -1.65e-02  -8.29e-03
## 759   -1.50e-02   4.19e-03   2.01e-02   2.33e-02   9.53e-04  -3.86e-03   8.76e-03
## 760    1.34e-02  -1.55e-03   2.50e-02  -1.01e-02  -1.77e-02   5.57e-03   1.46e-02
## 761    3.23e-03   4.38e-03  -1.35e-02  -1.87e-03   5.62e-03   5.21e-03  -1.88e-03
## 762   -4.27e-02  -2.03e-02   1.41e-02  -6.64e-02  -9.65e-03  -2.59e-02   8.90e-03
## 763    6.33e-02  -1.09e-02   2.95e-02   1.20e-02  -6.41e-03  -2.24e-03   1.16e-03
## 764   -3.52e-02  -2.26e-02   2.44e-02  -1.05e-02  -1.08e-02   4.87e-03  -6.15e-04
## 765    6.12e-03  -1.71e-02   3.79e-03  -3.12e-03  -6.01e-03   6.82e-03  -7.90e-04
## 766    7.60e-03  -1.54e-03  -3.92e-03  -4.33e-03   4.71e-03   2.21e-03  -5.39e-03
## 767   -2.24e-02   1.51e-02  -1.27e-02   1.20e-02   2.24e-02   2.99e-02  -2.62e-02
## 768    1.03e-02  -1.19e-03   4.40e-03   1.88e-02  -4.54e-03  -7.79e-03   7.46e-03
## 769    1.16e-02   7.54e-03   2.35e-02   2.04e-02   1.58e-02  -1.75e-02  -2.79e-02
## 770    1.26e-02   1.27e-02  -6.61e-03  -7.60e-03  -3.31e-03   1.41e-03   2.16e-03
## 771   -1.23e-02   9.90e-03   5.12e-03   2.50e-03  -3.06e-02  -9.92e-04   7.06e-03
## 772    5.44e-03   8.15e-03   1.37e-02  -2.23e-03  -7.56e-03   4.85e-04  -1.20e-02
## 773    5.77e-03  -6.98e-03  -1.05e-02  -4.87e-03   1.40e-03  -3.15e-03   6.00e-03
## 774    7.55e-03   1.16e-02   2.81e-03   1.26e-02   1.80e-04  -1.41e-03  -1.04e-02
## 775    3.64e-03   1.03e-02  -1.26e-02  -1.02e-02   7.61e-03  -8.33e-03  -5.89e-03
## 776    4.84e-03   3.64e-03  -6.13e-03  -2.20e-03   5.23e-03   2.45e-03   3.26e-05
## 777    6.62e-02  -1.34e-02   1.19e-02   1.34e-02  -9.99e-03   2.06e-03  -9.31e-03
```

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## 778   -2.90e-02 -2.61e-02 -1.85e-03 -4.92e-02  1.42e-02 -2.22e-02  2.02e-02
## 779   -1.68e-02 -2.40e-02 -6.65e-03 -2.48e-03 -9.12e-03 -2.64e-02  2.00e-02
## 780    1.05e-01 -5.96e-02  7.72e-02  1.42e-01  6.58e-02 -1.76e-01 -3.17e-03
## 781   -2.32e-02 -6.51e-02 -4.10e-02 -7.33e-02 -2.47e-02  2.28e-02 -6.52e-02
## 782    1.04e-02 -4.92e-03 -1.06e-02 -6.93e-03 -2.96e-03  1.68e-04  5.64e-03
## 783    1.12e-02  1.42e-03  1.43e-02  1.63e-02 -1.51e-02  6.96e-03  1.09e-02
## 784   -2.37e-03 -3.00e-03 -5.47e-04  2.04e-03  2.12e-03 -1.28e-04 -5.76e-03
## 785    1.41e-03 -1.77e-03 -1.12e-03  2.50e-03 -3.59e-03 -1.74e-04  4.28e-03
## 786    6.35e-03 -1.24e-02  6.70e-03 -3.08e-03  9.75e-06 -1.92e-02 -3.02e-02
## 787    7.16e-03 -1.33e-02  5.01e-03 -7.20e-03 -7.68e-04  3.87e-03 -1.99e-04
## 788   -7.84e-04  7.42e-04  1.13e-03  3.24e-04 -9.57e-04 -1.94e-04 -1.11e-04
## 789    2.77e-03  3.28e-03 -3.38e-03 -9.34e-03  2.88e-03 -3.61e-03  3.63e-03
## 790   -4.31e-02 -1.39e-02  5.58e-02  3.04e-02  2.06e-01 -8.52e-02 -7.48e-02
## 791   -8.99e-04  1.10e-04 -3.92e-04  2.35e-04 -5.63e-04 -3.53e-04  1.65e-04
## 792    9.83e-02  1.15e-01 -8.55e-02  1.11e-02 -3.91e-02  3.33e-02  2.56e-02
## 793   -2.87e-02  8.61e-02  2.98e-02  1.93e-02  2.56e-02 -4.60e-03 -2.09e-02
## 794    1.11e-02 -3.34e-03  1.13e-03  1.70e-02 -5.42e-03  5.83e-03 -9.40e-03
## 795    1.38e-02 -1.04e-02  2.20e-02  2.41e-02 -1.06e-02  1.14e-02  1.56e-02
## 796   -2.69e-02  4.67e-03  4.85e-03 -6.88e-03  4.76e-03  7.96e-03 -6.67e-04
## 797    1.11e-01 -8.06e-03  4.60e-02  1.25e-01 -5.95e-02  3.62e-02  6.86e-02
## 798   -4.07e-02  7.44e-02 -3.05e-02 -5.75e-02  2.26e-02 -8.04e-03  6.54e-03
## 799    4.91e-02  3.32e-02 -4.87e-03  1.49e-02 -9.70e-03 -1.83e-03  1.83e-02
## 800    4.87e-03 -5.22e-03  3.74e-03 -2.02e-03 -1.44e-02  1.39e-02 -1.74e-02
## 801   -3.23e-02 -2.35e-03 -3.45e-02  1.87e-02  2.05e-02 -2.40e-02  1.83e-03
## 802    7.48e-02 -1.34e-02 -1.04e-01  1.70e-02  2.30e-03 -1.31e-02  1.54e-03
## 803    7.49e-03 -5.75e-03  1.04e-02 -2.26e-03 -3.00e-03  2.87e-03  4.36e-03
## 804    1.98e-03 -1.02e-03 -1.95e-03 -1.25e-03  7.90e-04  1.49e-03 -2.05e-06
## 805   -2.38e-03  7.47e-03  7.61e-03 -4.86e-03 -4.58e-03  3.20e-03  2.40e-04
## 806   -2.14e-03 -4.93e-03 -1.23e-03  2.29e-03 -1.19e-03  2.11e-03 -3.32e-03
## 807    8.20e-03 -1.33e-02  4.96e-03 -3.05e-03 -5.83e-03 -1.54e-02 -7.05e-03
## 808   -2.40e-02  4.07e-03  2.24e-02 -3.75e-03  1.04e-02 -1.07e-02  4.87e-03
## 809   -4.12e-04  1.03e-03  8.15e-04  3.11e-04 -2.77e-04 -1.33e-04 -1.95e-04
## 810   -3.41e-03  3.97e-03 -2.28e-03 -7.23e-03 -1.64e-03  3.38e-03 -4.13e-03
## 811   -2.18e-03 -4.65e-03 -6.86e-05  1.23e-03 -6.32e-03  4.39e-03 -1.29e-03
## 812    7.86e-03 -4.85e-03  3.69e-03 -1.31e-03  2.17e-03  4.97e-03  5.02e-04
## 813    1.11e-02  1.74e-02 -4.56e-03 -2.83e-03 -4.43e-03 -2.37e-02  1.78e-02
## 814   -4.35e-02 -6.02e-02  1.02e-02  1.52e-02  7.68e-02 -4.16e-02  1.64e-01
## 815    2.51e-03  9.12e-04  6.40e-03 -6.79e-03 -7.44e-03  4.85e-03  3.26e-03
## 816   -6.02e-02  3.91e-02 -6.08e-03 -6.24e-02  1.41e-02  5.34e-03 -2.35e-02
## 817    5.41e-03  1.56e-03  5.08e-03  1.20e-02  1.45e-04 -6.50e-03  7.84e-03
## 818    6.66e-04 -1.87e-03 -2.75e-03 -5.66e-04  1.34e-03 -2.22e-03  2.94e-03
## 819    7.91e-03  1.01e-02  3.55e-03 -4.27e-03  2.62e-03  2.01e-03 -5.76e-03
## 820    1.07e-02 -8.10e-03 -3.48e-03  4.96e-02 -3.34e-03  2.10e-03  1.16e-02
## 821    2.40e-03  2.95e-03  3.19e-03 -9.14e-04 -2.13e-03  1.28e-03  1.33e-03
## 822   -1.55e-03  1.24e-03  6.00e-04  6.00e-05 -1.14e-03  3.68e-03 -1.48e-03
## 823    1.22e-02  1.66e-02  1.41e-02  1.99e-02 -1.26e-03 -5.25e-04  5.34e-03
## 824    1.37e-02  3.59e-03 -9.46e-03  1.87e-02 -1.20e-02 -1.49e-02  7.83e-03
## 825    2.10e-02 -2.56e-02 -4.86e-02 -1.15e-02  1.79e-02  1.14e-02 -2.52e-04
## 826   -4.24e-02  1.33e-03 -7.17e-03  3.05e-02 -2.52e-02 -3.38e-02  2.20e-02
## 827    5.78e-04  5.14e-04  1.48e-04 -1.52e-03 -6.73e-04 -9.51e-04 -9.76e-04
```

```
## 828   -5.01e-02   1.00e-02   9.52e-03  -1.35e-02  -8.57e-03   1.80e-02   9.04e-03
## 829   -3.10e-02  -5.69e-02   2.13e-02   1.28e-02  -4.13e-03  -1.64e-02   6.78e-03
## 830    6.84e-02   1.96e-02  -4.68e-02   1.44e-02   1.84e-02  -1.15e-02  -2.11e-02
## 831   -3.97e-02   3.29e-02   1.10e-02  -1.32e-02  -2.32e-03   9.46e-03   1.77e-03
## 832   -4.54e-02  -5.72e-02  -4.08e-02  -6.46e-02  -1.44e-02  -3.18e-03   3.03e-02
## 833    6.98e-03   5.45e-03   3.28e-03  -3.56e-03  -3.71e-03   6.02e-03   1.66e-03
## 834    8.50e-03   6.92e-03  -1.94e-03  -3.27e-03  -2.03e-03   4.55e-03  -4.21e-03
## 835    3.22e-03  -6.95e-03   5.71e-03   6.01e-03  -2.12e-03  -3.11e-03   1.94e-03
## 836    1.14e-02  -7.64e-03   7.86e-03   4.11e-02   1.69e-03  -8.55e-03   4.27e-03
## 837   -4.08e-02  -3.82e-02  -2.64e-02  -1.82e-01  -5.11e-02   2.91e-02  -3.08e-02
## 838    6.87e-03  -5.79e-03   2.56e-03   1.15e-02  -8.04e-03   1.16e-02   1.68e-02
## 839    6.75e-02  -2.88e-02  -2.45e-02  -4.57e-02  -6.92e-03  -5.22e-02   1.00e-01
## 840    6.61e-03   8.36e-03   1.23e-02  -2.46e-02  -8.29e-05   4.75e-04   5.47e-03
## 841    2.41e-03   2.96e-03  -2.30e-03  -1.96e-03  -2.63e-03   8.95e-03   1.13e-03
## 842    1.59e-02  -3.96e-02  -1.46e-02  -6.34e-03  -3.26e-03  -2.61e-03   1.46e-03
## 843    8.33e-02  -6.75e-02  -3.38e-02  -5.19e-02   1.42e-02  -5.31e-03   1.87e-03
## 844   -2.42e-03   9.84e-03   3.35e-03   2.57e-03  -6.40e-04   3.50e-03  -5.67e-03
## 845    5.58e-03  -6.95e-03  -4.95e-05  -3.10e-03  -1.18e-02   8.40e-03   5.66e-03
## 846   -4.93e-02   2.68e-02  -6.70e-02   8.88e-02   3.29e-02  -4.94e-03   4.11e-03
## 847    1.89e-03  -2.76e-03  -1.25e-03  -5.15e-03   3.93e-03  -2.94e-03  -4.49e-03
## 848    1.08e-02  -2.61e-02  -7.95e-03  -2.22e-03   2.47e-03  -1.28e-02   4.29e-03
## 849    7.55e-03   6.55e-03   8.77e-03  -1.74e-02   2.28e-03   2.37e-03  -4.74e-03
## 850   -2.99e-02  -3.94e-02  -7.68e-02  -5.55e-02  -6.66e-03   1.13e-02  -4.22e-03
## 851    3.80e-03   6.03e-03   5.70e-03  -2.16e-03  -3.45e-03   3.21e-03   6.85e-05
## 852   -5.30e-03  -2.75e-03   2.82e-03   1.54e-03  -8.72e-03  -3.04e-03   6.29e-03
## 853   -1.82e-03  -2.63e-03   2.94e-03   1.54e-03  -7.85e-05   2.56e-03  -4.67e-03
## 854    1.55e-02  -7.31e-02  -2.65e-03  -5.91e-03  -9.05e-03   2.59e-03  -3.94e-04
## 855   -4.02e-02  -2.15e-02   2.18e-02   1.99e-02  -6.42e-03   1.86e-03   7.49e-03
## 856   -4.25e-03  -4.01e-03   5.80e-04  -6.98e-03   3.65e-05  -1.26e-03  -4.41e-03
## 857    1.52e-02   2.85e-02  -3.42e-03   3.48e-02   1.19e-02  -5.61e-03  -8.14e-03
## 858    8.13e-02  -6.37e-02  -6.24e-02   2.39e-02   4.95e-02   2.83e-02  -3.64e-02
## 859   -1.44e-02   1.63e-02   5.18e-04   4.53e-03  -4.51e-02   1.30e-02   8.96e-03
## 860   -5.62e-02  -2.15e-02  -1.07e-02   3.45e-02   2.30e-03  -1.30e-02   7.51e-03
## 861    6.86e-02  -5.43e-02  -2.31e-04   1.78e-02  -5.38e-03  -1.96e-02   3.64e-03
## 862   -4.28e-04   1.62e-03   2.73e-05   1.58e-04   8.93e-04   7.04e-04   1.81e-03
## 863    1.39e-02   1.60e-02   5.88e-03  -5.98e-03   4.51e-03   3.09e-03   1.55e-03
## 864    3.32e-03   3.96e-03   2.07e-03  -2.00e-03   6.57e-04  -1.88e-03   1.66e-03
## 865   -3.22e-02   2.30e-02  -3.31e-02  -1.48e-01   1.74e-02  -1.36e-02  -9.95e-04
## 866    7.79e-03  -1.19e-02  -1.29e-03  -4.29e-03  -2.66e-04   1.79e-03   4.12e-03
## 867    9.77e-03   1.36e-02   1.67e-02  -4.98e-03   3.19e-04   6.61e-03  -7.31e-04
## 868    3.62e-04  -8.12e-04  -1.30e-03  -1.42e-04   9.73e-04   7.23e-05  -1.30e-04
## 869    1.23e-02   1.67e-02  -3.08e-03  -5.65e-03  -1.22e-03  -8.02e-03  -6.54e-03
## 870   -5.64e-03  -8.63e-03   4.49e-03   2.14e-03  -9.25e-03  -3.56e-03  -4.55e-03
## 871   -3.16e-02   3.39e-03  -1.51e-02  -8.07e-03   2.17e-02  -1.62e-02   1.36e-02
## 872   -4.90e-02  -3.57e-02  -1.63e-02  -1.56e-01   2.55e-02  -2.76e-02   2.20e-03
## 873    1.39e-02   1.73e-02   1.24e-03   2.14e-02  -2.74e-02  -2.62e-02   2.37e-02
## 874    3.68e-03   2.46e-03   1.80e-03  -1.96e-03   3.76e-03  -5.23e-03   3.70e-03
## 875    2.16e-03   1.82e-03  -9.64e-04   4.04e-03   3.86e-03   6.58e-04  -7.28e-03
## 876    2.65e-03  -1.12e-02  -3.18e-03  -2.08e-03   3.67e-03   4.51e-03  -1.09e-02
## 877    1.10e-02  -7.74e-03  -4.42e-03  -6.45e-03   1.49e-03   1.04e-02  -1.23e-02
```

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## 878    -5.87e-03 -7.52e-03 -3.16e-03 -7.72e-03 -5.68e-04 -1.18e-03 -2.35e-03
## 879    -5.12e-03  2.38e-03 -1.81e-03  1.72e-02 -8.20e-04 -4.68e-05 -6.87e-03
## 880     3.43e-03  1.58e-03 -4.21e-03  1.16e-03  8.25e-04  2.50e-04 -2.12e-03
## 881     1.69e-02 -3.22e-02  1.83e-02 -6.13e-03  6.27e-03  1.61e-03 -1.10e-02
## 882    -3.59e-02  6.96e-03 -6.90e-04 -5.96e-03  9.09e-03 -1.88e-02  2.69e-02
## 883    -4.74e-02 -4.71e-02 -2.07e-02 -5.32e-03  6.16e-02 -1.85e-02 -4.71e-02
## 884     1.38e-03  2.24e-03 -5.17e-03 -1.24e-03  9.40e-04 -2.65e-03  9.23e-04
## 885     7.24e-03  9.77e-03  1.47e-02 -2.15e-02 -5.11e-03  1.14e-02  8.42e-04
## 886     7.93e-03  3.70e-03  3.13e-03 -3.38e-03 -3.96e-03 -2.27e-03 -7.34e-04
## 887    -2.37e-02 -2.31e-02 -1.64e-02 -5.69e-03  3.05e-03 -1.27e-02 -7.16e-03
## 888    -6.53e-02 -1.53e-02 -5.77e-02 -1.84e-02  4.10e-02  1.37e-02  8.98e-03
## 889    -2.01e-02  1.41e-02 -1.34e-03  9.62e-03  1.24e-04  3.38e-02 -1.45e-03
## 890    -6.84e-02  1.65e-02 -3.09e-02  3.53e-02  3.03e-02 -9.65e-03 -4.46e-02
## 891    -4.68e-03  2.61e-03  1.87e-02 -1.22e-02 -9.50e-03  2.05e-03 -1.73e-03
## 892    -6.58e-05 -8.83e-05 -3.06e-05  8.00e-05  2.58e-05 -1.10e-04  2.28e-04
## 893     7.17e-02  9.62e-02  1.22e-02  6.39e-02  5.58e-03 -2.12e-03  3.50e-04
## 894     3.40e-03  3.20e-04  2.74e-03 -2.71e-03 -6.01e-04  1.15e-03 -1.59e-03
## 895    -1.93e-02 -1.14e-02  8.25e-02  8.05e-03 -6.37e-02  3.48e-02 -4.55e-02
## 896    -4.43e-02  2.43e-02  2.63e-02  3.20e-02 -2.08e-02 -2.94e-02  2.27e-02
## 897     1.03e-02 -1.77e-02  6.82e-03 -4.31e-03  6.06e-03 -2.44e-02  2.03e-02
## 898     3.61e-03 -2.45e-03  5.81e-03 -2.31e-03 -2.15e-03  6.29e-03  3.37e-03
## 899    -5.68e-03 -3.62e-03  4.07e-03  1.30e-03 -1.79e-02  8.61e-03 -1.29e-02
## 900     7.52e-04  8.88e-04 -2.70e-04 -2.44e-03  1.78e-03  7.56e-04  1.44e-04
## 901     5.35e-03  7.68e-03 -5.40e-03  9.88e-03 -8.03e-05 -1.61e-02  1.44e-02
## 902     7.05e-03  9.75e-03  6.15e-03  8.99e-03 -3.67e-03  2.91e-03 -8.39e-05
## 903     4.75e-03  1.01e-02 -1.46e-03 -3.90e-03 -3.38e-03  7.63e-04  3.49e-03
## 904    -2.78e-02  1.92e-02  1.22e-02 -9.26e-03 -2.92e-02  2.37e-02 -1.95e-03
## 905    -1.72e-03 -1.80e-03  2.09e-03  3.70e-03 -3.43e-03 -1.02e-03 -2.47e-04
## 906    -6.18e-03 -2.04e-03 -1.73e-02 -1.28e-02 -1.18e-02  9.59e-03 -6.80e-03
## 907     5.51e-03 -3.19e-03  6.22e-03  6.79e-03 -4.72e-03  4.54e-03 -6.42e-04
## 908    -4.04e-03 -7.74e-03 -4.39e-03  2.04e-03  1.43e-02 -4.58e-03 -1.19e-02
## 909     4.38e-04 -4.52e-05 -2.25e-04  5.49e-05 -1.50e-04  2.63e-04 -3.35e-04
## 910    -6.12e-02  3.49e-02 -5.64e-03 -1.70e-02 -1.27e-03  2.07e-02 -4.09e-03
## 911     3.70e-03 -1.14e-02 -5.40e-04 -1.52e-03 -1.55e-03  4.73e-03 -2.79e-04
## 912     3.57e-02 -9.94e-03 -5.98e-03  8.97e-03  1.85e-03 -1.07e-02  9.86e-03
## 913    -4.74e-02 -4.20e-02 -2.47e-02  3.37e-02 -2.47e-02 -1.95e-02  2.66e-03
## 914     1.01e-01  1.80e-02 -6.26e-02  1.70e-02  1.27e-01 -1.28e-02 -1.44e-01
## 915    -3.27e-02 -7.24e-03 -2.64e-02 -7.42e-03 -1.45e-01  2.72e-02 -5.79e-02
## 916    -2.22e-02  4.55e-02  2.91e-03 -9.41e-02 -1.76e-02  8.73e-03  1.89e-02
## 917    -4.71e-03 -1.48e-03  2.37e-03  1.21e-03 -3.36e-03 -6.95e-03 -1.12e-02
## 918    -5.93e-02  2.47e-02  4.05e-02 -6.55e-03 -3.74e-03 -3.43e-03  1.15e-02
## 919    -2.25e-02 -4.67e-02  9.45e-03  1.91e-02 -4.67e-02  2.05e-02 -1.47e-02
## 920    -2.60e-04 -2.91e-04  2.31e-04 -2.97e-04 -2.22e-04  2.80e-04  2.14e-04
## 921     5.07e-03  4.62e-03 -9.49e-03 -1.41e-02  9.17e-03 -1.31e-03 -3.78e-03
## 922    -5.36e-02  3.99e-02 -7.67e-03  4.13e-02 -1.26e-02  1.27e-03  1.68e-02
## 923    -3.14e-03  1.29e-04 -5.18e-03 -5.44e-03  5.68e-03 -9.82e-03  1.36e-02
## 924     5.05e-03  1.10e-02 -8.63e-03 -1.46e-02  6.38e-03 -1.09e-02  1.07e-02
## 925    -3.63e-02  8.15e-03  1.39e-02 -1.02e-02 -4.20e-04  5.67e-03 -1.08e-02
## 926    -3.37e-02 -6.22e-03 -5.09e-02 -9.24e-03  1.07e-02  1.17e-02 -2.59e-03
## 927     1.70e-03  5.80e-04 -1.69e-03 -5.96e-03  1.87e-03  9.40e-03 -1.08e-02
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## 928   -3.49e-02   2.21e-02  -2.21e-02  -3.81e-03   1.99e-02  -4.30e-02   7.74e-03
## 929   -4.10e-02  -9.77e-02  -1.40e-01   2.21e-02   5.64e-02   6.87e-02  -1.07e-01
## 930   -4.57e-02   2.72e-02   1.34e-02  -8.63e-03   1.59e-02   1.05e-04  -1.32e-02
## 931    2.24e-02   1.29e-02   4.29e-02   2.53e-02  -2.70e-03   7.45e-02  -6.48e-02
## 932   -3.48e-02  -1.39e-02  -8.04e-03  -7.14e-03   9.89e-04   1.13e-02   1.08e-02
## 933    9.55e-02  -3.66e-02   6.24e-02   2.62e-02  -8.88e-02   3.20e-02   1.05e-01
## 934    1.37e-02   2.13e-02  -5.90e-03   2.48e-02   1.71e-05  -4.25e-04  -2.05e-03
## 935    1.42e-02  -1.86e-02   2.20e-03   2.62e-02   1.10e-03  -3.62e-03  -1.22e-02
## 936   -7.37e-03  -7.36e-04  -7.26e-04   2.44e-02   1.74e-03   3.04e-03  -1.84e-02
## 937    1.55e-02  -4.14e-02  -7.04e-03  -3.56e-03   3.30e-02   4.32e-03   1.83e-03
## 938   -4.87e-02   1.25e-02   1.77e-02  -7.08e-03  -4.20e-02  -1.42e-02  -1.24e-01
## 939    6.82e-03   1.05e-02   2.99e-02  -5.79e-03  -1.97e-03   3.78e-04  -6.12e-03
## 940   -5.88e-02   7.20e-02   5.98e-03   2.25e-02   1.58e-01  -1.70e-02  -4.94e-02
## 941   -3.85e-02  -3.61e-02  -4.31e-02   2.19e-02   3.79e-02  -1.84e-02  -3.21e-02
## 942    6.51e-03   1.25e-02  -3.98e-03  -7.39e-03  -3.97e-04   2.83e-02  -2.17e-02
## 943   -4.00e-03  -5.69e-03  -4.75e-03   7.85e-04  -6.48e-03   5.76e-03  -4.97e-03
## 944    4.87e-03   7.42e-03   3.30e-03  -1.47e-02   5.94e-03  -1.66e-03  -7.76e-03
## 945    1.94e-03   5.46e-03  -1.60e-03  -9.53e-04   3.24e-03  -3.80e-03  -5.76e-03
## 946   -2.62e-02   2.36e-02  -1.84e-02  -8.32e-03   2.54e-02   3.36e-03   2.79e-03
## 947    6.22e-02  -3.64e-02  -5.97e-02   6.75e-03   1.43e-02   4.00e-02  -1.43e-02
## 948    9.05e-02   5.50e-02  -1.31e-01  -5.78e-02  -4.73e-02   3.18e-02   8.44e-02
## 949   -4.56e-02  -5.75e-02   3.45e-02  -1.18e-02  -1.82e-02   5.65e-02   2.45e-02
## 950    7.23e-03   1.97e-02   1.12e-02  -4.87e-03   5.68e-03  -1.36e-02   1.15e-02
## 951   -1.72e-02  -1.15e-02   7.48e-03   1.31e-02   9.18e-03  -7.58e-03  -2.22e-02
## 952    1.54e-02   1.55e-02  -2.31e-02  -1.41e-02  -5.09e-02   9.59e-02  -6.43e-02
## 953    6.77e-02  -4.75e-02  -2.27e-02   7.69e-02   3.70e-03  -1.03e-02   1.99e-02
## 954   -3.11e-02  -6.39e-02   2.32e-02   1.28e-01  -2.22e-03  -1.65e-02   7.31e-03
## 955   -4.27e-03   1.57e-03   2.22e-03   2.82e-03  -4.09e-03   1.27e-03   4.76e-03
## 956   -3.07e-03  -1.02e-03  -9.67e-03   7.65e-04   4.84e-04  -2.69e-03   4.51e-03
## 957    8.11e-05   2.41e-05  -2.83e-04  -3.30e-05   3.21e-04   1.16e-04  -2.11e-04
## 958    8.30e-04  -1.23e-04   4.95e-04  -4.56e-04  -1.07e-03  -8.79e-05   5.21e-04
## 959   -7.33e-03  -1.04e-02  -9.39e-03  -1.24e-02  -1.33e-03   8.03e-03  -7.64e-03
## 960    2.58e-03   2.73e-03   4.15e-03  -1.20e-03   5.82e-03  -3.22e-03  -9.60e-03
## 961    4.44e-03  -4.57e-03   4.87e-03  -2.49e-03  -4.84e-03   8.31e-03   4.04e-03
## 962   -5.30e-02   3.52e-02   1.22e-02  -5.49e-03  -4.08e-02  -4.23e-02   2.51e-02
## 963   -4.19e-03   2.26e-03  -1.84e-03  -1.37e-03  -1.57e-02   4.84e-03   1.04e-02
## 964    8.12e-04   1.05e-04   4.66e-04  -4.80e-04   1.26e-03  -1.42e-03   1.05e-03
## 965    1.09e-02   1.75e-02   7.10e-03  -3.41e-02   1.26e-02  -1.43e-02  -4.58e-02
## 966    6.09e-03   9.28e-03  -7.91e-03   7.65e-03   1.90e-03   1.55e-03  -7.23e-04
## 967    1.02e-01  -2.64e-02   1.54e-01  -6.59e-02  -1.46e-01   7.11e-02   2.05e-02
## 968    3.79e-03  -1.35e-02   1.37e-03  -2.70e-03  -2.52e-03   2.88e-03   2.99e-03
## 969    5.51e-03  -3.90e-03  -1.35e-02   1.32e-02   3.66e-03   1.50e-02  -6.83e-03
## 970   -6.16e-03  -1.12e-02  -1.86e-02   1.55e-03  -1.98e-03   1.36e-02  -1.49e-02
## 971    7.13e-04   3.45e-04  -6.73e-04  -4.90e-04  -2.76e-04   7.33e-04  -1.70e-04
## 972    5.55e-03  -1.75e-03  -1.47e-02   7.60e-03   7.10e-03   2.75e-03   4.10e-03
## 973    2.24e-03   2.75e-04  -1.52e-03  -7.21e-03  -3.42e-04   2.34e-03  -9.02e-04
## 974   -7.65e-04  -8.47e-04  -7.38e-05   1.34e-04   1.32e-03   1.63e-03  -1.21e-03
## 975    2.00e-02  -3.47e-02  -5.80e-03  -3.85e-03  -2.77e-02   4.96e-03   1.54e-02
## 976    9.99e-02   3.74e-02  -5.11e-02  -6.10e-02   1.14e-01  -3.16e-02  -6.25e-02
## 977   -1.73e-02   1.07e-02  -1.81e-02  -3.44e-03   1.85e-02  -2.65e-02  -3.57e-02
```

```
## 978     7.74e-03 -1.49e-02  3.18e-03 -5.60e-03 -1.30e-02 -1.06e-02  7.57e-03
## 979    -3.23e-03  8.42e-03  1.91e-03  2.17e-03 -7.52e-03  7.79e-03  1.72e-02
## 980     6.76e-03  8.91e-03  1.22e-04 -4.32e-03  1.51e-02 -5.20e-03 -2.07e-02
## 981    -4.05e-02 -1.82e-02 -1.73e-02  9.91e-02  1.36e-02 -2.65e-02  6.94e-04
## 982     6.94e-02  3.98e-02 -4.99e-02 -5.36e-02  5.49e-03 -1.96e-02  3.42e-02
## 983     1.00e-03  1.28e-03  1.04e-03 -4.46e-04 -5.41e-04  4.56e-04  5.13e-04
## 984    -1.66e-03 -3.99e-03  1.24e-03  5.82e-03 -2.33e-03  4.11e-03 -1.26e-03
## 985     1.22e-02  2.43e-02  1.23e-02 -5.76e-03 -2.78e-03  5.48e-03  1.33e-02
## 986     8.18e-02  2.54e-03 -2.42e-03 -5.05e-02  1.69e-02 -1.07e-01  7.37e-02
## 987    -4.23e-02  2.78e-02  2.14e-02 -4.91e-02  5.56e-03 -3.28e-04  5.82e-03
## 988     7.87e-03  1.38e-02  1.14e-02 -3.39e-03  5.26e-03  3.27e-03 -6.83e-03
## 989    -2.97e-02  7.01e-03 -7.42e-04  2.11e-02 -2.85e-03  1.81e-02 -1.43e-02
## 990    -2.73e-02  2.01e-03 -3.72e-04 -8.62e-03 -8.16e-03 -1.43e-03  5.13e-03
## 991     4.24e-03  4.61e-03  4.16e-03 -1.14e-02 -3.07e-04 -2.62e-03  2.22e-03
## 992    -4.35e-02  1.34e-02  2.31e-02  3.06e-02 -1.68e-04  2.90e-03 -1.19e-03
## 993    -4.09e-03  9.83e-03 -3.03e-03  2.83e-03 -1.89e-03 -1.58e-03 -6.38e-03
## 994     6.43e-03  1.43e-02  5.06e-04  1.17e-02  1.56e-03  2.56e-03 -2.25e-03
## 995    -2.21e-02  1.94e-02 -1.49e-02  1.87e-02  1.28e-02 -4.32e-03  1.34e-02
## 996    -5.82e-02  9.47e-03 -2.75e-02  8.32e-02 -9.53e-02  1.91e-02  6.45e-02
## 997    -3.80e-02  2.55e-02  7.01e-03 -7.89e-03  3.28e-03  2.35e-02 -2.36e-02
## 998     6.81e-02 -2.30e-02  3.34e-02  2.12e-02 -1.29e-02 -7.57e-02  8.70e-02
## 999     1.37e-02  2.44e-02 -6.36e-03 -8.26e-03 -5.15e-03 -1.10e-02  6.37e-04
## 1000   -2.49e-03 -9.45e-04 -3.94e-03  1.31e-03  9.78e-03 -3.81e-03 -9.76e-03
## 1001    7.16e-03  6.79e-03  6.19e-04  2.47e-02  1.36e-03 -5.51e-03  8.18e-03
## 1002    1.01e-02 -1.14e-02 -2.04e-03 -9.30e-03 -2.57e-03  2.08e-03  3.57e-03
## 1003    1.43e-02  2.21e-02  7.51e-03 -3.50e-03  2.02e-02 -1.33e-03 -9.03e-03
## 1004    5.84e-03  1.32e-02 -1.17e-02  1.09e-02  1.86e-03  6.16e-04  2.44e-03
## 1005    4.94e-03  8.51e-03 -6.97e-03 -2.48e-03  5.57e-03 -1.06e-02  1.00e-02
## 1006    9.66e-03  1.36e-02  1.59e-02  3.03e-02  1.53e-02 -3.22e-02  3.48e-02
## 1007   -3.01e-02  5.29e-02  7.72e-02  2.28e-02 -3.41e-02  2.31e-03 -4.22e-03
## 1008    7.72e-02 -3.70e-02 -2.74e-02  7.69e-03 -6.61e-02  2.68e-02  7.68e-02
## 1009    2.70e-04 -3.81e-04 -6.38e-05  3.27e-04 -3.55e-04  3.70e-04 -7.65e-04
## 1010    1.33e-03  1.39e-03  8.00e-04  1.61e-04 -1.14e-03  1.18e-03 -9.37e-04
## 1011   -1.58e-02 -1.26e-02  5.01e-02  3.80e-02 -1.48e-02  4.13e-02 -2.04e-02
## 1012   -5.64e-02 -5.78e-03 -2.98e-02 -1.32e-02  1.83e-03 -2.85e-02  1.94e-02
## 1013   -2.76e-02 -3.84e-02 -3.26e-02  1.13e-02  1.39e-02 -1.36e-02 -2.01e-03
## 1014    3.38e-03  7.71e-04 -1.19e-03 -1.20e-03  4.75e-04  9.85e-04  1.19e-03
## 1015    9.16e-03  2.13e-02  3.24e-02 -3.01e-02  5.05e-03 -6.32e-03 -1.79e-04
## 1016    8.19e-03  2.10e-03 -1.08e-02 -2.95e-03  3.68e-03 -9.56e-04  1.13e-03
## 1017   -2.26e-02 -4.26e-02 -3.27e-02  8.15e-02  2.06e-02 -1.93e-02  1.25e-03
## 1018    7.18e-03  4.60e-03 -6.73e-03 -2.87e-02 -1.02e-02  2.73e-02 -1.54e-03
## 1019    8.89e-03 -3.57e-03  8.95e-03  1.91e-02 -6.10e-03  1.28e-02  1.41e-02
## 1020    1.23e-02  1.12e-02 -9.00e-03  2.19e-02  7.29e-03 -6.39e-04  7.68e-03
## 1021    2.90e-03  4.69e-03 -7.97e-03  4.57e-03  8.62e-04 -4.67e-03  1.81e-03
## 1022   -2.41e-02 -4.85e-02  3.29e-02  1.73e-02 -1.74e-02 -6.16e-03  2.19e-02
## 1023    2.33e-03  1.82e-03  9.89e-04  9.45e-03 -1.43e-03 -3.31e-03  1.58e-03
## 1024    4.47e-03 -1.59e-02  1.80e-02 -1.69e-02 -9.61e-03  5.92e-04 -1.05e-03
## 1025   -4.63e-03  1.02e-02  1.04e-03  1.45e-02  4.91e-03  3.80e-02 -1.02e-02
## 1026   -2.44e-02  1.23e-02  2.44e-03 -4.58e-03 -2.76e-03 -2.57e-03  8.67e-03
## 1027   -1.45e-03 -1.70e-03 -1.27e-03 -2.21e-03 -4.80e-04  3.38e-04 -1.09e-03
```

```
## 1028   6.86e-03 -5.11e-03 -1.15e-03   1.16e-02 -3.12e-03 -6.22e-03   6.84e-03
## 1029 -2.84e-02   1.60e-02   5.86e-03   1.49e-02 -6.05e-03   6.30e-03   5.97e-03
## 1030 -6.67e-03 -1.77e-02   4.62e-04   2.44e-02 -6.02e-03   1.05e-02 -1.63e-02
## 1031   2.21e-03 -3.82e-03   1.84e-03 -1.55e-03   2.35e-03   2.60e-03 -9.15e-03
## 1032 -5.01e-02 -1.01e-01   2.65e-01   1.48e-01 -1.42e-01   1.10e-01   5.47e-02
## 1033   7.59e-02   8.08e-02   4.79e-02   7.63e-02 -3.75e-03 -1.66e-02 -2.80e-03
## 1034 -3.79e-02 -7.13e-02 -5.58e-02   9.20e-03 -2.27e-02   5.72e-02   1.81e-02
## 1035 -4.11e-02 -1.63e-02 -4.24e-02 -9.90e-03   4.47e-02 -2.61e-02   2.74e-02
## 1036   5.06e-03 -6.12e-03 -6.06e-03 -2.87e-03 -1.36e-03   1.76e-03   1.30e-03
## 1037   7.06e-02 -2.95e-02   2.73e-02 -1.13e-01 -3.65e-02   8.93e-03   2.41e-02
## 1038 -2.80e-02 -1.10e-02   2.46e-02 -3.53e-02   2.26e-05   1.62e-02 -2.72e-03
## 1039   2.51e-03   4.00e-03 -2.19e-03 -1.51e-03   3.24e-03   4.04e-04 -2.30e-03
## 1040 -3.40e-02 -1.22e-02 -6.20e-02   3.04e-02 -4.75e-03 -1.35e-02   4.06e-02
## 1041 -3.66e-03 -7.96e-03 -1.23e-03   9.44e-04 -9.87e-03   6.32e-03   9.25e-05
## 1042   8.86e-03 -1.20e-02   1.09e-02 -2.41e-03 -8.82e-04 -5.59e-03   3.97e-03
## 1043   5.28e-03   4.59e-03   6.22e-03 -3.75e-03 -5.68e-03   3.55e-03   5.56e-03
## 1044 -2.63e-03 -3.14e-03   1.12e-02 -4.41e-03 -1.13e-02   3.25e-03   6.35e-03
## 1045   2.88e-03   2.15e-03 -8.01e-03   4.12e-03   3.81e-03   6.41e-04 -5.68e-04
## 1046 -5.98e-04 -2.40e-04   1.60e-04   1.66e-03   1.43e-04 -6.76e-04   2.29e-04
## 1047   1.40e-02   1.18e-02   2.03e-02   1.54e-02 -1.29e-02   8.32e-03   2.63e-03
## 1048   8.93e-03   2.95e-03   1.08e-02 -1.83e-03 -1.29e-03 -6.40e-04   8.31e-03
## 1049   6.13e-03 -9.67e-03 -7.99e-03 -3.16e-03   8.01e-03 -2.63e-03   7.21e-03
## 1050   4.74e-03   2.13e-04   5.23e-03   6.87e-03   1.18e-03   4.44e-03 -4.40e-03
## 1051   1.05e-02   1.38e-02 -2.12e-04 -7.48e-03   2.53e-03 -1.84e-02 -5.83e-03
## 1052   1.12e-02   1.55e-02 -3.13e-03   1.94e-02   4.19e-03   5.06e-03   1.17e-03
## 1053   2.81e-03   2.86e-03   2.13e-03   4.69e-03 -2.01e-03   2.12e-03 -2.50e-04
## 1054 -6.46e-03   2.94e-02 -1.79e-02 -1.34e-02   5.77e-03   1.25e-02 -1.06e-02
## 1055 -8.34e-03 -4.63e-03   3.38e-02   5.08e-03 -1.86e-02   9.08e-03 -1.39e-02
## 1056   9.19e-03   3.49e-03   1.78e-02   1.75e-02   4.31e-03 -2.10e-03 -6.27e-03
## 1057 -3.32e-02 -7.60e-03   1.69e-02   1.21e-01   4.98e-03 -2.38e-02   9.81e-03
## 1058 -2.71e-02 -4.57e-02 -9.84e-03 -1.09e-01   2.61e-02   3.35e-02 -2.65e-02
## 1059   6.79e-02   7.66e-02   3.28e-02   7.04e-02 -1.39e-02 -7.93e-03   7.87e-02
## 1060   3.86e-03   3.01e-03   5.64e-03 -1.83e-03 -2.96e-03   3.01e-03 -1.51e-05
## 1061   3.85e-02 -2.67e-02   1.17e-02 -2.72e-02 -7.74e-03 -3.19e-05   1.38e-03
## 1062   4.32e-03   4.94e-03 -1.16e-05 -2.18e-03 -3.12e-03   4.50e-03   3.18e-04
## 1063 -5.21e-02 -2.59e-02 -7.36e-03   3.58e-02   4.06e-02 -4.01e-03 -1.73e-02
## 1064   3.75e-03   1.91e-03   1.16e-03 -1.60e-03 -3.76e-03 -4.79e-03   6.41e-03
## 1065   2.57e-04 -7.08e-04 -1.56e-04 -7.27e-04 -1.32e-04   1.16e-04   2.50e-05
## 1066 -1.60e-02 -2.23e-03   3.01e-02 -4.58e-03 -5.40e-03   3.47e-03 -1.57e-04
## 1067   8.77e-03   2.19e-02 -6.01e-03 -6.68e-03 -4.45e-03 -9.85e-03   1.08e-02
## 1068 -2.96e-02 -9.20e-03   9.26e-03   2.04e-02 -1.75e-03 -1.06e-02   5.03e-03
## 1069 -2.94e-02 -4.56e-02   5.55e-02 -4.98e-02 -2.20e-02 -1.62e-03 -1.06e-03
## 1070   1.33e-02   6.78e-03   1.29e-02   5.07e-02 -8.30e-03   7.92e-03 -3.62e-03
## 1071   1.72e-02   5.80e-03   1.53e-02 -4.51e-03 -1.82e-03   8.83e-03   2.79e-03
## 1072   6.22e-03 -2.79e-02   7.68e-03 -2.69e-03   3.00e-04   2.23e-03   4.48e-04
## 1073   8.94e-03   6.52e-03   6.29e-04 -2.82e-03 -1.54e-03   9.68e-04   5.17e-03
## 1074   1.25e-02   9.40e-03   7.29e-03   2.16e-02   7.37e-03 -6.58e-03   1.48e-02
## 1075 -4.06e-02 -1.53e-02 -4.85e-02 -9.27e-03   2.37e-02   8.04e-03 -3.54e-03
## 1076   4.42e-03 -1.83e-02   3.83e-03 -1.08e-02 -5.18e-03   1.24e-03   3.13e-03
## 1077 -9.79e-03   1.87e-02 -9.89e-04   5.80e-03 -1.33e-02   4.12e-03 -2.35e-02
```

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## 1078 -2.20e-02 -3.07e-02  5.82e-02 -1.33e-01 -1.42e-02  5.91e-02 -6.28e-02
## 1079  2.42e-03  2.21e-03  1.02e-03 -8.10e-03  3.14e-03  1.41e-02 -1.28e-02
## 1080  9.33e-03 -1.40e-02  1.74e-02 -5.46e-03  4.42e-03  1.76e-02 -1.20e-02
## 1081 -2.58e-03 -3.35e-03  6.17e-04  5.56e-03  5.00e-04  1.24e-02 -3.05e-04
## 1082  1.44e-02 -2.14e-02  2.02e-02  5.25e-02 -1.56e-02 -2.80e-02  5.33e-03
## 1083  1.18e-02  7.35e-03 -4.90e-03 -6.28e-03 -8.16e-04 -4.50e-03 -2.77e-03
## 1084 -4.84e-02 -1.64e-02  1.07e-01 -1.52e-01  1.41e-02  6.20e-02 -1.26e-02
## 1085 -2.87e-02  3.82e-03  1.42e-02 -2.49e-03  1.44e-02 -1.81e-02 -2.99e-02
## 1086 -4.32e-02 -4.48e-02 -4.23e-04 -1.33e-01 -2.88e-02 -7.50e-02  1.05e-01
## 1087 -6.11e-02  1.65e-02 -2.55e-02 -2.52e-02 -1.97e-01  1.54e-01 -7.88e-02
## 1088 -3.01e-02 -4.47e-02 -1.61e-02 -7.91e-03  4.92e-03 -2.26e-02 -8.52e-03
## 1089  8.28e-03  4.90e-03  1.45e-02 -5.17e-03 -5.33e-03  6.16e-03  9.03e-04
## 1090  1.19e-03 -1.01e-03  8.48e-04 -8.90e-04  3.11e-04 -1.95e-03  3.87e-04
## 1091  7.96e-03  1.08e-02  4.85e-03 -2.48e-03  1.37e-02 -1.59e-02  1.92e-02
## 1092  1.69e-02  1.39e-02  2.27e-02 -5.02e-03 -1.40e-02 -2.62e-03  1.41e-02
## 1093 -1.72e-03  2.46e-03 -8.97e-04  1.01e-03  8.48e-04  4.27e-04 -1.30e-03
## 1094 -3.38e-02  3.35e-03 -2.76e-02  5.98e-02 -1.24e-02  2.35e-02 -6.48e-02
## 1095  9.40e-03  1.68e-02  1.54e-02 -3.45e-02 -1.69e-02  5.08e-03 -3.64e-02
## 1096 -3.76e-02  2.25e-02 -1.76e-02 -5.75e-03  3.60e-03 -6.32e-02  4.72e-03
## 1097 -2.91e-02 -3.35e-02  1.56e-02 -7.16e-03 -4.50e-02  2.14e-02 -7.14e-03
## 1098  1.73e-02  7.46e-03 -6.02e-04 -6.92e-03 -2.22e-03  6.09e-04  4.80e-04
## 1099 -7.19e-03 -3.32e-03  1.08e-03 -1.82e-03  2.58e-03  1.13e-03 -2.86e-03
## 1100  1.77e-03  3.22e-03  7.70e-03 -9.12e-04  2.49e-03 -2.97e-03 -6.08e-03
## 1101  1.28e-02 -3.79e-02  4.78e-03 -1.02e-02 -6.98e-03  7.03e-03 -2.15e-02
## 1102  5.49e-03  6.52e-03 -6.00e-03 -3.13e-03 -2.03e-03  1.39e-02 -8.00e-04
## 1103 -4.03e-02 -4.14e-02 -2.31e-03  2.50e-02 -3.93e-04  2.77e-03 -4.68e-03
## 1104 -1.02e-03 -5.16e-04  1.26e-03  6.04e-04 -2.35e-03  7.08e-04  2.50e-03
## 1105  4.58e-03 -5.43e-03 -3.32e-03  6.89e-03 -1.71e-03  3.47e-03 -5.78e-04
## 1106  1.19e-02  1.48e-02  3.68e-03  5.48e-02  1.37e-02 -6.59e-04 -1.18e-02
## 1107 -2.93e-02 -7.72e-02 -2.53e-02  1.48e-02 -4.56e-02  5.17e-02  5.58e-02
## 1108  7.61e-03  1.18e-02  2.21e-03 -3.23e-03 -5.29e-03  1.10e-03  3.61e-03
## 1109  1.46e-02 -2.45e-02  2.03e-02 -7.36e-03 -1.49e-02  2.33e-02 -4.27e-03
## 1110  7.38e-03  1.04e-02  5.61e-03 -3.91e-03  2.00e-03  7.04e-03  7.75e-04
## 1111  7.58e-02 -3.44e-02 -5.00e-02  1.68e-02  1.91e-02 -1.34e-02  3.05e-03
## 1112 -7.45e-02  4.33e-02  1.61e-01  5.14e-02  5.51e-01 -2.41e-01 -2.89e-01
## 1113 -4.33e-02 -8.19e-02 -6.53e-02  2.56e-02  1.76e-02 -5.82e-02 -9.91e-03
## 1114  3.11e-04  1.93e-04 -1.77e-04  7.31e-04 -1.82e-04 -4.36e-04  2.71e-04
## 1115  1.09e-02  1.46e-02  8.66e-03  1.31e-02 -4.41e-03  2.65e-02 -3.05e-02
## 1116  1.73e-02  1.81e-02  3.10e-02  6.52e-02 -1.14e-02  4.28e-03 -4.96e-04
## 1117 -8.04e-03  1.69e-02 -1.38e-03  5.97e-03  5.68e-02 -3.90e-02 -2.97e-02
## 1118  2.91e-03 -2.14e-03 -1.23e-03  4.90e-03  2.14e-03  2.92e-04 -3.02e-03
## 1119  6.01e-03 -1.92e-02  3.18e-03 -4.48e-03 -5.23e-03  6.98e-03 -1.60e-03
## 1120  3.03e-03  6.40e-03  5.09e-03 -1.81e-03  4.60e-03 -3.73e-03 -6.97e-03
## 1121  1.00e-02  1.62e-02  6.61e-03 -3.25e-02  2.40e-03  2.82e-03 -2.54e-03
## 1122  8.90e-03  8.44e-03 -2.37e-02 -5.39e-03  7.70e-03  5.67e-03 -9.58e-04
## 1123 -5.58e-02 -2.32e-02 -1.63e-02 -1.06e-02 -1.13e-02 -5.71e-02  3.13e-02
## 1124 -5.79e-02 -6.25e-03  2.74e-04 -1.52e-02 -1.87e-04  1.75e-02  1.62e-02
## 1125 -5.41e-03 -9.58e-03 -7.13e-03  2.57e-03 -8.99e-03  5.39e-05  1.59e-02
## 1126  3.82e-03 -6.91e-03  5.80e-03 -1.15e-02 -1.83e-03 -9.60e-04  1.83e-03
## 1127 -1.68e-02 -3.06e-03 -1.34e-02 -3.05e-03  1.76e-02  4.24e-03  2.08e-03
```

```
## 1128   1.46e-03 -5.33e-04 -1.47e-03 -7.71e-04  6.19e-04  7.56e-04 -1.41e-03
## 1129 -5.46e-02  1.90e-02  3.88e-03 -1.33e-02  1.63e-03  4.01e-03  1.06e-02
## 1130   4.20e-04 -1.05e-03 -4.76e-04 -1.17e-04  8.64e-04  3.32e-04  4.96e-05
## 1131   3.14e-03 -2.26e-03  6.96e-04  6.15e-03  4.18e-03 -5.16e-03 -5.63e-03
## 1132   1.32e-02  4.28e-03  1.02e-02  1.91e-02  5.33e-03  3.18e-02 -3.34e-02
## 1133   5.20e-03 -2.81e-04  1.17e-02 -1.22e-03 -3.71e-03 -3.80e-03  2.53e-03
## 1134 -1.96e-04 -2.05e-04 -1.55e-04  1.05e-04  1.93e-04  8.46e-05 -1.55e-04
## 1135   7.02e-03 -6.52e-03  1.18e-02  9.34e-03 -3.65e-03  6.99e-03 -1.58e-04
## 1136   1.31e-03 -5.52e-04  6.67e-04  3.70e-03 -7.54e-03  7.97e-03  4.27e-03
## 1137   7.09e-02  2.02e-02 -2.42e-02  1.73e-02  1.30e-02 -4.13e-03 -3.39e-03
## 1138 -6.19e-02  2.00e-02 -1.99e-02  3.59e-02  3.19e-03  1.14e-02  3.41e-03
## 1139 -3.82e-02 -2.82e-03 -2.52e-02 -1.62e-02 -7.26e-02  7.61e-02 -3.52e-02
## 1140   3.41e-04 -2.50e-04 -1.63e-04 -2.44e-04 -9.58e-05  1.30e-04  1.57e-04
## 1141 -4.31e-03  4.51e-04  4.26e-03  2.74e-03 -6.96e-03  3.64e-03  5.95e-03
## 1142   1.38e-02  2.03e-02 -5.46e-03  2.66e-02 -1.63e-02 -1.48e-02  8.29e-03
## 1143 -6.09e-02  1.32e-02  5.15e-02 -9.70e-03 -3.33e-02 -4.15e-02  3.80e-02
## 1144   7.18e-03  5.41e-03  1.67e-02 -5.32e-03 -7.22e-03 -1.25e-02 -1.88e-03
## 1145   1.47e-02  9.50e-03 -8.96e-03 -3.93e-03 -4.55e-03  8.60e-03  1.26e-02
## 1146 -3.56e-02  1.89e-02  9.23e-03 -7.74e-03 -6.26e-04  1.27e-03 -2.24e-03
## 1147   4.70e-03  2.88e-03  1.12e-03 -1.22e-03 -1.42e-03 -5.94e-03 -9.96e-03
## 1148   8.92e-03  5.47e-03  9.52e-03  1.20e-02 -1.17e-02 -8.52e-03  1.02e-02
## 1149   4.52e-03  6.71e-03  4.78e-03 -3.61e-03  1.27e-02 -4.46e-03 -1.75e-02
## 1150   5.81e-03  1.04e-02 -1.88e-03 -2.86e-03  4.58e-03 -7.48e-03  8.76e-03
## 1151 -1.18e-03 -3.33e-03  1.93e-03  4.96e-04 -1.32e-06  7.78e-03 -5.45e-03
## 1152   2.26e-02 -5.03e-02  1.25e-02  3.78e-02 -2.66e-02 -1.33e-02  1.75e-02
## 1153   9.00e-03 -1.21e-02 -6.10e-03 -4.28e-03  6.50e-03  1.25e-03 -1.04e-02
## 1154   6.36e-02 -3.14e-02  8.25e-03  6.64e-02 -3.48e-03 -1.29e-02  7.44e-03
## 1155 -4.03e-03 -5.34e-03  4.57e-03  1.36e-03 -2.80e-03 -8.60e-04 -1.07e-03
## 1156 -1.69e-03  1.46e-04 -3.41e-04  5.10e-04  2.58e-05  3.10e-03 -3.89e-03
## 1157   3.82e-03  7.18e-03  3.09e-03 -2.57e-03  1.48e-02 -1.70e-02 -2.86e-02
## 1158 -4.02e-03 -9.57e-03  1.02e-02  1.55e-03 -5.46e-04  1.45e-02 -1.25e-02
## 1159   4.71e-03 -3.02e-03  1.45e-03  7.28e-03 -3.72e-04 -1.42e-03  3.27e-03
## 1160   1.51e-02  1.47e-02  1.80e-02  6.35e-02 -5.89e-03  3.98e-02 -5.99e-03
## 1161 -8.41e-03  1.27e-02 -1.56e-02  4.75e-03 -3.07e-03 -3.07e-04 -1.32e-03
## 1162 -2.16e-02 -1.54e-02  9.08e-03 -2.10e-02 -4.34e-04 -5.08e-03  9.14e-03
## 1163 -4.96e-02  3.90e-02 -7.49e-03 -4.49e-03  5.85e-02  2.13e-01  2.92e-02
## 1164   1.02e-02  2.10e-02  6.43e-03  3.81e-02  5.86e-03  1.36e-02 -3.05e-02
## 1165 -4.18e-02 -6.54e-05 -3.48e-02  2.88e-02  3.05e-02  9.97e-03 -2.24e-02
## 1166 -3.78e-02  2.84e-02 -2.01e-03 -7.53e-03 -2.38e-02 -3.28e-02  3.23e-02
## 1167   1.55e-03 -5.68e-03 -2.21e-03 -4.38e-04  3.85e-03  1.37e-04 -7.90e-04
## 1168   6.95e-02 -1.84e-02 -2.01e-02 -4.28e-02 -3.65e-02  2.43e-03  2.74e-02
## 1169 -7.07e-02  2.71e-02 -2.15e-02 -1.68e-02 -1.52e-02  1.73e-03  1.16e-02
## 1170   3.01e-03 -2.68e-03 -2.05e-03 -2.04e-03 -7.82e-04  9.76e-04  1.36e-03
## 1171   1.48e-02  9.54e-03 -1.07e-02  2.14e-02 -2.47e-03  1.95e-03  2.30e-04
## 1172   6.05e-02 -1.44e-02  1.29e-02 -8.39e-02  3.84e-03 -2.96e-03 -1.35e-02
## 1173   1.23e-02  2.24e-02 -7.49e-04 -5.55e-03  2.57e-03  1.17e-02  3.04e-03
## 1174   5.06e-03  8.27e-03  7.46e-03 -2.11e-03  1.76e-03  1.56e-03  3.90e-03
## 1175 -4.66e-03  4.59e-03 -5.67e-05  1.08e-03 -4.30e-03  6.01e-03 -7.00e-03
## 1176   3.28e-03 -7.49e-03  4.08e-03 -8.50e-04 -3.63e-03 -2.91e-03  1.18e-03
## 1177   5.17e-03 -1.01e-03 -1.43e-02 -3.14e-03  1.07e-02  1.42e-03  1.53e-03
```

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## 1178 -4.70e-03 -8.75e-04 -6.26e-03  1.75e-03 -3.32e-03  9.06e-03 -1.20e-02
## 1179  1.03e-02 -1.84e-02 -3.28e-03 -5.42e-03  3.87e-03  3.55e-03 -1.16e-02
## 1180 -1.94e-03 -2.38e-03 -3.92e-04  9.57e-04 -2.31e-03  4.25e-04  4.30e-03
## 1181  1.14e-02  2.73e-02 -5.26e-02 -8.96e-03  1.56e-02 -5.09e-03  4.32e-04
## 1182 -5.07e-03 -3.00e-03 -4.99e-03 -8.30e-04  4.21e-03 -2.96e-03  4.38e-03
## 1183 -5.81e-04 -1.38e-04 -1.11e-03  2.31e-04  1.03e-04 -3.13e-04 -5.87e-05
## 1184 -5.05e-03  1.08e-02  4.97e-03  2.27e-03 -2.25e-03  1.03e-03 -4.28e-03
## 1185 -4.67e-03  1.83e-02  2.18e-02  2.87e-03 -1.48e-02  5.90e-03  4.52e-04
## 1186 -2.95e-03  1.20e-02 -1.34e-02  1.41e-03 -3.14e-03  2.24e-03  1.41e-03
## 1187  8.79e-02  1.38e-01  2.70e-02  9.69e-02 -2.58e-02  4.84e-02  4.87e-02
## 1188 -8.28e-03 -6.96e-04  2.24e-02  2.18e-02 -6.74e-03  1.81e-02 -1.40e-02
## 1189 -5.53e-02  1.54e-02 -4.28e-03  2.60e-02 -2.77e-02  8.85e-02  2.57e-02
## 1190 -5.10e-03 -9.60e-04 -5.66e-03  2.07e-03  3.79e-03 -5.61e-03 -3.74e-03
## 1191 -8.72e-04 -5.59e-04 -5.06e-05 -1.40e-03  4.43e-04 -1.39e-04 -8.18e-04
## 1192  5.04e-03  9.35e-03 -7.61e-04 -4.47e-03 -2.09e-02  1.72e-02  6.44e-03
## 1193 -3.37e-02 -5.55e-03 -4.50e-02  2.23e-02  2.52e-02 -1.33e-03 -1.39e-02
## 1194  1.89e-02 -4.96e-02  2.34e-02 -5.01e-03  1.29e-03 -9.62e-04 -1.47e-02
## 1195 -5.75e-03 -2.34e-03  2.14e-02  3.38e-03 -1.41e-02 -1.44e-03  6.40e-04
## 1196  3.09e-05  1.27e-05 -1.42e-05 -4.00e-06 -4.90e-06 -8.30e-05  5.13e-05
## 1197 -3.48e-02 -6.03e-03 -5.25e-02 -1.11e-02  2.23e-02  2.32e-02  3.51e-04
## 1198  1.41e-02  2.41e-02 -3.82e-03 -4.88e-03  2.07e-03 -1.12e-03  4.73e-03
## 1199 -1.73e-02 -2.78e-02  4.08e-03 -3.18e-03 -3.85e-03 -7.48e-03  4.05e-03
## 1200  8.98e-03  7.20e-03 -2.64e-03  1.36e-02  2.18e-03  2.40e-03  3.84e-03
## 1201 -2.07e-02 -1.06e-02  1.84e-03 -6.73e-03  6.97e-03  1.22e-03 -8.68e-03
## 1202  7.07e-02 -5.37e-02  1.33e-02  1.59e-02  8.02e-03  2.47e-02 -7.66e-03
## 1203  1.75e-03 -2.24e-03 -4.20e-04  2.14e-03  8.12e-05  1.08e-03 -3.07e-04
## 1204 -3.54e-03 -8.78e-04 -8.35e-03  2.40e-03  8.08e-04 -4.12e-04 -2.34e-04
## 1205  8.94e-02 -7.25e-02  1.15e-01  2.89e-02 -7.71e-02  2.26e-02  8.94e-02
## 1206 -4.44e-02 -5.03e-02 -5.71e-02  2.09e-02  3.98e-02 -3.34e-02  6.77e-03
## 1207  4.14e-04 -9.83e-04 -6.39e-04 -2.18e-04  8.75e-04 -5.11e-04 -7.90e-04
## 1208  1.12e-02  1.72e-02  2.41e-02 -1.02e-02 -8.33e-03  4.07e-03 -3.53e-04
## 1209 -2.14e-03 -2.23e-03  4.33e-03  1.01e-02 -2.76e-03 -3.44e-05 -2.07e-03
## 1210 -2.96e-03  5.08e-03 -2.48e-04  6.79e-03 -2.75e-03 -1.78e-03 -1.98e-04
## 1211 -7.40e-04  1.16e-03  2.31e-03  6.88e-04 -9.82e-04  1.53e-03 -2.06e-03
## 1212  1.22e-02  5.48e-03  2.44e-02  1.55e-02 -5.53e-03  1.18e-03  5.99e-03
## 1213  7.92e-03  1.48e-02 -7.14e-03 -5.47e-03  1.26e-02 -1.35e-02 -2.34e-02
## 1214  9.67e-02  1.05e-01  1.60e-02  2.32e-02  6.05e-03 -1.07e-02 -8.02e-03
## 1215 -3.71e-03 -2.43e-03  3.95e-03 -6.75e-04  1.78e-03 -7.49e-04 -2.82e-03
## 1216 -6.94e-02  1.75e-02  1.83e-02 -7.29e-02  1.28e-02 -1.87e-02  1.34e-02
## 1217 -9.64e-03 -2.71e-03  7.50e-03 -2.30e-03  5.96e-03 -4.79e-03 -1.02e-02
## 1218  9.19e-04 -3.30e-04 -5.10e-04 -5.62e-04 -3.19e-04  4.39e-04  8.56e-04
## 1219  3.17e-03  4.14e-03  8.61e-03 -9.15e-04  3.52e-03 -3.03e-03 -8.80e-03
## 1220  2.45e-03 -1.58e-03 -3.81e-03 -1.29e-03 -1.17e-03  5.75e-04  4.70e-04
## 1221  5.31e-03 -3.61e-04 -1.12e-02  9.31e-03 -1.29e-03  3.80e-05 -7.11e-03
## 1222  2.71e-04 -9.27e-04 -4.16e-04  5.65e-04 -6.60e-04 -9.73e-04 -1.09e-03
## 1223 -4.27e-02 -6.75e-02 -3.49e-03  1.59e-02  1.19e-02 -2.95e-02 -2.42e-03
## 1224 -4.62e-02 -5.59e-02 -1.11e-02 -1.38e-01  9.47e-02 -1.69e-01  1.71e-01
## 1225  1.06e-02  1.77e-03 -6.29e-04 -2.65e-02 -1.75e-03  4.25e-03  5.63e-03
## 1226  1.68e-02  2.07e-02  2.60e-02 -7.14e-03 -5.17e-02  2.78e-02 -1.40e-02
## 1227  1.46e-02  1.59e-02 -2.45e-02  2.24e-02 -1.73e-03  9.34e-03  4.15e-03
```

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## 1228  2.61e-03  1.71e-03 -6.16e-04 -9.14e-03 -2.85e-03  3.19e-03  2.36e-03
## 1229  4.64e-03 -7.95e-03  9.48e-04 -2.25e-03  3.14e-03  1.36e-03  1.17e-03
## 1230 -4.82e-02 -7.31e-03 -6.45e-02 -1.23e-02  2.09e-02  1.20e-02  3.90e-04
## 1231  1.35e-02  1.25e-02 -1.00e-02 -3.91e-02 -1.86e-02  1.29e-02  2.14e-03
## 1232  2.81e-03  1.89e-03 -5.05e-03 -1.76e-03  2.43e-03 -1.73e-03  6.61e-03
## 1233 -3.28e-03  1.58e-04  7.52e-03  1.89e-03 -4.99e-03  3.28e-03 -4.92e-03
## 1234  5.83e-03  8.41e-03 -7.29e-03  6.74e-03 -1.11e-02  2.47e-02  7.97e-03
## 1235  2.86e-03  5.77e-03  9.15e-03  1.24e-02 -1.65e-03  1.16e-03  8.05e-04
## 1236 -8.60e-03  4.66e-03  8.44e-03  6.33e-03 -6.05e-03 -4.61e-03  7.06e-03
## 1237  7.78e-02 -2.99e-02  8.41e-02  2.37e-02 -5.97e-02 -5.15e-03  3.27e-02
## 1238 -2.45e-02 -6.09e-03  2.99e-02  1.48e-02 -3.03e-02 -1.12e-02  3.58e-03
## 1239  1.77e-02  1.43e-02 -1.87e-03  7.06e-02  1.10e-03 -4.69e-03 -1.38e-03
## 1240  1.61e-02 -2.49e-02 -4.49e-03  2.34e-02  8.30e-03 -6.29e-03  6.72e-03
## 1241 -7.86e-04  7.52e-05  3.39e-04 -1.35e-04  4.09e-04 -3.12e-04 -2.58e-04
## 1242  1.28e-02  9.88e-03  6.41e-03  4.40e-02  7.14e-03 -6.81e-03  1.02e-02
## 1243  9.75e-03  1.47e-03  2.85e-02  2.10e-02 -2.19e-02  1.44e-02 -3.81e-02
## 1244  3.91e-03 -1.06e-02  1.14e-02 -1.09e-02 -3.93e-03  9.55e-03  3.50e-03
## 1245  1.34e-02 -3.76e-03 -9.43e-03 -5.04e-03  2.20e-04 -1.57e-02  2.67e-02
## 1246  1.25e-02  8.99e-03 -6.43e-03 -8.00e-03  4.18e-03  6.67e-04 -1.32e-02
## 1247 -5.19e-02 -7.05e-02  2.35e-02 -6.76e-02  4.29e-03 -9.22e-03 -1.14e-04
## 1248  4.80e-03 -9.12e-03  8.26e-03 -3.57e-03 -6.67e-03  4.07e-03  4.75e-03
## 1249  1.02e-02  1.70e-02 -3.32e-03  1.44e-02 -6.98e-03  1.04e-02  2.13e-03
## 1250 -2.45e-02 -3.00e-02 -2.63e-02  1.20e-02 -1.62e-02  3.40e-03  2.35e-02
## 1251 -3.80e-02  1.79e-02 -1.97e-02 -4.10e-02  9.29e-03  1.76e-03  8.28e-03
## 1252  3.45e-03  6.91e-03 -1.01e-03 -1.05e-03  7.48e-03 -5.50e-03  3.79e-03
## 1253 -1.84e-02  2.21e-03 -2.63e-04 -5.59e-03 -1.15e-02  1.62e-02 -8.13e-04
## 1254  3.13e-04  5.10e-05 -3.61e-04  7.02e-04 -2.19e-04 -2.70e-04  6.37e-04
## 1255 -1.05e-03 -1.26e-03 -2.22e-03  2.75e-03  9.61e-04 -1.81e-03 -5.93e-04
## 1256  5.80e-02  4.65e-02  6.11e-03 -3.92e-02 -2.44e-02 -3.63e-03  3.43e-03
## 1257  1.32e-02  5.89e-03 -4.62e-03  1.91e-02 -8.23e-03  2.28e-02  1.31e-02
## 1258 -3.58e-02 -4.18e-02  1.01e-02  2.36e-02 -1.86e-02 -4.13e-02  4.98e-03
## 1259  1.10e-02  6.89e-03  9.95e-03 -4.00e-03 -6.22e-03  7.28e-03 -9.31e-04
## 1260  6.04e-04 -3.17e-04 -4.73e-04 -4.85e-04 -3.35e-04  2.44e-03  1.96e-04
## 1261  2.54e-03  3.70e-03 -1.05e-02 -2.21e-03  5.48e-03 -7.18e-03  7.52e-03
## 1262 -5.20e-02 -2.46e-03 -5.47e-02 -1.71e-02  2.57e-02  1.95e-02 -1.35e-02
## 1263  6.13e-02  3.68e-03 -2.04e-02  2.12e-02  1.05e-02 -2.16e-02 -5.33e-03
## 1264  5.41e-03 -1.47e-02  5.14e-03  7.61e-03 -3.02e-03  1.32e-03  4.28e-03
## 1265  1.62e-03  1.92e-03 -6.23e-03 -5.06e-04  4.65e-03  7.83e-04  5.69e-04
## 1266 -5.19e-03 -1.47e-04  5.46e-03 -1.26e-02 -4.06e-03  1.10e-02 -8.65e-03
## 1267  3.68e-03 -7.94e-03  5.80e-03 -2.13e-03 -2.81e-03  1.15e-03  3.05e-03
## 1268  5.91e-03 -1.40e-03  3.15e-03  6.54e-04  1.67e-03  1.06e-02 -7.66e-03
## 1269 -2.61e-02 -1.71e-02 -2.82e-02  1.57e-02  2.19e-02 -8.51e-04  7.36e-03
## 1270  2.06e-03  2.64e-03  1.09e-03 -1.44e-03  1.07e-03 -2.85e-03  3.29e-03
## 1271  1.25e-02  1.55e-02  1.09e-02 -3.55e-03  1.24e-02 -6.16e-05 -8.64e-03
## 1272 -2.80e-02 -2.82e-02 -1.20e-04  1.39e-02  1.13e-02 -2.22e-02  2.22e-02
## 1273  2.11e-03  3.72e-03  2.50e-03 -1.12e-03 -5.03e-04 -5.23e-04  2.18e-03
## 1274  7.74e-02  2.57e-02 -6.22e-03  1.92e-02  2.30e-02 -3.06e-02  4.03e-03
## 1275  8.89e-03  7.52e-03 -1.18e-02 -6.53e-03 -8.35e-05 -1.07e-03 -8.54e-03
## 1276  1.68e-03  3.82e-03  2.33e-03 -1.22e-03  3.19e-03  2.13e-05 -1.27e-03
## 1277  7.97e-03  4.86e-03  1.84e-02 -4.50e-03 -9.22e-03  8.00e-03  8.34e-03
```

```
## 1278 -5.99e-03 -2.44e-03 -2.26e-03 -1.24e-03  7.46e-03  2.02e-03 -2.26e-03
## 1279 -2.66e-02  7.91e-03  1.07e-03 -4.56e-03  9.48e-04 -5.89e-03 -6.70e-03
## 1280  7.54e-02 -3.96e-02 -5.00e-02 -5.37e-02  9.68e-03  5.79e-03  9.64e-03
## 1281  4.10e-03  2.40e-03 -1.17e-02  4.75e-03 -2.75e-03  1.66e-02 -5.06e-03
## 1282  7.96e-02  3.66e-02 -1.93e-02  1.90e-02 -2.64e-02  1.28e-02  7.52e-02
## 1283  1.20e-03 -2.14e-03 -3.21e-03 -6.50e-04  8.71e-04 -1.23e-03 -2.84e-03
## 1284 -1.36e-03 -2.68e-03  6.03e-04  4.25e-03  1.06e-03 -6.95e-04 -1.08e-03
## 1285  5.80e-03 -1.32e-02  1.48e-02 -2.46e-03  1.27e-03 -9.38e-04 -2.12e-03
## 1286  1.16e-02  7.29e-03  3.95e-02 -7.90e-03  8.71e-03 -1.60e-03 -8.54e-03
## 1287  6.20e-03 -5.02e-03  3.48e-03  1.08e-02 -3.44e-03 -3.09e-03  5.12e-03
## 1288  6.25e-03 -7.72e-03  4.57e-04  1.01e-02  2.10e-03  3.97e-03 -1.29e-03
## 1289 -6.22e-03 -6.57e-03  1.99e-02  4.97e-03 -1.77e-02  1.20e-02 -8.27e-03
## 1290 -1.32e-03 -2.98e-03  3.51e-03  1.48e-03 -1.74e-03  5.78e-03 -1.34e-03
## 1291 -4.65e-02  4.33e-02  1.91e-02 -7.51e-02  1.13e-02 -1.11e-01 -5.50e-02
## 1292 -4.33e-02  6.25e-03 -3.30e-02 -1.64e-01  5.26e-02 -7.16e-02 -7.43e-02
## 1293  7.05e-03 -6.97e-03  5.05e-03 -3.36e-03  3.10e-03  5.63e-03 -6.08e-03
## 1294  8.68e-03  1.48e-02  4.89e-03  1.86e-02  3.12e-04 -2.38e-03  2.20e-04
## 1295  1.07e-02  1.39e-02  1.99e-03  4.25e-02  6.09e-03 -3.54e-03 -9.44e-04
## 1296 -2.08e-02  5.41e-03 -9.98e-03 -2.22e-02 -1.61e-02 -2.35e-02 -3.23e-02
## 1297  7.02e-03  5.12e-03  1.23e-02 -2.10e-03 -3.37e-03 -2.45e-02  1.38e-02
## 1298  8.06e-02 -5.98e-02  3.07e-02  2.65e-02  1.81e-02 -6.64e-02 -1.88e-03
## 1299 -5.61e-02  1.48e-01 -5.52e-02  1.46e-01 -2.90e-02  3.45e-02 -1.70e-02
## 1300 -5.88e-03  4.32e-03  1.35e-03  3.34e-03  3.44e-04 -1.38e-03 -3.96e-03
## 1301 -2.13e-03  7.25e-03 -1.74e-03  1.52e-03 -1.76e-03  2.47e-03  1.12e-03
## 1302 -4.61e-03  1.84e-02  2.65e-02 -9.99e-03 -2.83e-02 -8.11e-03  3.36e-02
## 1303  1.10e-02 -9.92e-04  3.04e-03 -3.36e-02 -2.56e-03 -6.77e-03  1.29e-02
## 1304 -3.16e-02  1.41e-02 -2.90e-02 -8.83e-03 -5.09e-03  4.56e-03 -5.81e-02
## 1305  6.58e-03  9.92e-03 -1.13e-02 -5.33e-03  1.46e-02  9.76e-03 -2.40e-02
## 1306 -6.41e-03 -4.81e-04 -5.40e-03 -7.44e-03  7.87e-04 -1.43e-02 -3.31e-03
## 1307  1.12e-02  6.83e-03  1.23e-02 -5.38e-03  1.07e-02  5.40e-03 -8.82e-03
## 1308  5.81e-03 -2.79e-02  4.07e-03 -3.54e-03 -3.93e-03  3.90e-03 -1.07e-03
## 1309 -4.22e-02 -3.29e-02 -7.11e-02  2.54e-02  2.48e-02  7.89e-03  1.07e-02
## 1310  8.44e-03  7.16e-03  4.45e-03 -3.00e-03 -4.99e-03 -4.84e-04  1.32e-03
## 1311 -3.62e-02  1.12e-02  5.47e-05 -1.10e-02  3.83e-02 -2.62e-04 -8.91e-03
## 1312  1.37e-02 -1.20e-03 -4.82e-03  6.20e-02 -2.76e-03  7.11e-03 -3.52e-03
## 1313 -4.95e-02  3.89e-02 -3.85e-02  2.26e-02  3.85e-02 -3.99e-02 -3.71e-04
## 1314  5.89e-02 -1.90e-03  1.13e-03  1.31e-02 -2.80e-03  1.04e-02  2.30e-02
## 1315 -4.66e-03  2.08e-02 -8.56e-03  2.01e-02 -8.00e-03  4.17e-03  8.95e-03
## 1316 -2.86e-02 -3.68e-02 -3.22e-02 -6.51e-03  9.37e-03  1.01e-02  4.53e-04
## 1317  3.06e-03 -7.65e-03  1.02e-02 -2.42e-03  6.72e-03 -2.81e-03 -1.11e-02
## 1318 -4.54e-02  1.04e-02 -1.34e-02  3.50e-02 -1.05e-02 -2.04e-02  1.97e-02
## 1319  1.23e-03  1.28e-03 -1.82e-03 -3.17e-03  1.02e-03 -2.68e-04  7.31e-04
## 1320  9.98e-03  7.28e-03  9.07e-03 -2.22e-02  8.99e-04  6.75e-03 -1.87e-03
## 1321  1.74e-03 -4.83e-03 -1.15e-03  2.91e-03 -8.70e-04  8.90e-04 -1.09e-03
## 1322  1.26e-02  1.80e-02  1.08e-02 -6.95e-03 -7.03e-04 -7.23e-03 -1.13e-02
## 1323 -9.85e-03 -2.98e-03 -1.91e-02 -1.69e-02 -1.09e-02  1.37e-02  4.38e-03
## 1324 -9.99e-04 -1.57e-04  4.23e-05  5.24e-04 -1.55e-04 -3.93e-04  8.50e-04
## 1325  1.11e-02 -7.18e-03 -7.57e-03 -6.77e-03 -3.40e-03  3.04e-02  2.30e-03
## 1326  8.23e-03  6.71e-03 -3.51e-04 -4.54e-03  1.45e-03  3.42e-03 -1.20e-03
## 1327  6.34e-02 -3.45e-02 -2.79e-02 -4.64e-02 -3.52e-02  1.16e-02  1.78e-02
```

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## 1328 -5.89e-03 -1.08e-02  2.55e-03  9.77e-04  4.13e-03  4.84e-02 -2.57e-02
## 1329  6.38e-03 -1.98e-02 -4.67e-03 -3.92e-03  1.23e-02 -7.05e-03 -9.65e-03
## 1330  1.07e-02  1.69e-02  9.66e-03 -3.97e-03 -5.42e-03  7.23e-03  6.74e-04
## 1331 -1.76e-03 -3.60e-03 -7.92e-03  9.64e-04 -8.99e-03  4.75e-03 -2.88e-04
## 1332 -7.99e-04 -8.26e-04 -2.24e-04  2.87e-04  7.70e-04 -5.84e-04  2.22e-03
## 1333  4.37e-02  7.77e-02 -2.36e-02 -3.47e-02  8.48e-03 -1.36e-02  1.19e-02
## 1334 -4.74e-02  1.38e-01 -6.10e-02  2.40e-02 -3.20e-02  5.34e-02 -1.02e-01
## 1335  2.25e-02 -2.82e-02 -1.50e-02  3.29e-02  1.06e-02 -1.95e-02 -4.88e-02
## 1336 -1.02e-03 -3.88e-04 -6.54e-04  4.66e-04 -6.15e-04 -3.29e-04  8.30e-04
## 1337 -2.00e-03  3.85e-03  5.55e-03  6.58e-03 -6.75e-04 -2.52e-03 -1.60e-03
## 1338  7.49e-03 -1.42e-02  8.59e-03 -5.31e-03 -8.02e-03  8.70e-03 -1.08e-03
## 1339 -3.82e-02 -3.58e-02 -3.84e-02 -6.10e-02  2.78e-02 -2.28e-02  8.90e-03
## 1340  6.88e-02  9.99e-02 -4.35e-03  1.24e-02  1.82e-02 -2.11e-02  3.39e-03
## 1341 -3.35e-02  1.42e-02  1.00e-02 -6.79e-03  3.41e-03 -2.65e-02  2.07e-02
## 1342  4.23e-03  7.10e-03 -1.38e-03 -1.19e-03 -6.48e-03 -1.15e-02  7.94e-03
## 1343 -2.16e-02  7.70e-03  1.24e-02 -4.48e-03 -7.61e-03 -2.31e-03  1.65e-03
## 1344  1.29e-02  4.88e-03 -3.62e-02 -5.58e-03  6.64e-03  2.39e-03 -2.07e-03
## 1345 -2.79e-02 -3.41e-02 -2.96e-02 -6.23e-03  6.62e-03  5.81e-03  9.89e-03
## 1346 -4.45e-02  3.26e-02  3.41e-02 -7.51e-03 -1.77e-03  2.49e-03  1.26e-02
## 1347  4.18e-03  5.53e-03  7.96e-03  7.21e-03  5.03e-03 -6.58e-03  1.26e-03
## 1348  1.14e-02 -3.10e-02  7.80e-03  1.77e-02 -2.07e-02  4.09e-02  1.70e-02
## 1349  6.89e-04  1.87e-03  1.13e-03 -9.37e-04  1.30e-03  4.33e-03 -3.97e-03
## 1350 -6.06e-02  2.14e-02  1.59e-02  3.89e-02 -3.90e-03  1.42e-02 -1.57e-02
## 1351  3.67e-03  2.73e-03 -6.68e-04  1.08e-02  4.08e-03 -9.49e-03  9.64e-03
## 1352 -8.88e-03 -1.10e-02 -7.15e-03 -7.47e-05  9.93e-03  3.48e-02 -1.66e-02
## 1353  3.77e-03 -4.51e-04  1.52e-03 -2.52e-03  1.79e-03  7.14e-03 -4.93e-03
## 1354  7.28e-02  9.18e-02 -1.14e-02  1.64e-02  4.38e-02 -1.58e-02  2.69e-02
## 1355 -4.47e-02  6.33e-04 -1.40e-01  3.66e-02  7.77e-02  2.89e-03  4.19e-03
## 1356  1.38e-02 -3.37e-03 -1.31e-02  4.84e-02  7.92e-03  5.15e-03  2.81e-03
## 1357  1.41e-03 -3.88e-03 -2.16e-03 -6.87e-04  1.18e-03 -2.67e-04  6.66e-04
## 1358 -7.08e-04 -7.33e-04 -4.28e-04  2.23e-03  3.87e-04 -2.50e-04  3.47e-04
## 1359 -2.22e-02  1.57e-02  3.04e-03 -6.90e-03  1.47e-03  1.06e-02  8.74e-06
## 1360 -2.88e-02  1.72e-02  3.43e-03  2.17e-02 -2.72e-03 -4.45e-04  9.66e-03
## 1361  5.76e-03  8.49e-03  2.44e-03  9.93e-03  4.01e-03 -6.27e-04 -6.58e-03
## 1362  2.25e-03 -2.69e-03 -3.57e-03 -1.34e-03  4.70e-03 -1.35e-03 -6.62e-03
## 1363  1.04e-02  1.44e-02  2.31e-03 -6.13e-03  8.34e-04  4.76e-03  7.36e-03
## 1364  7.20e-03  4.11e-03  3.25e-03  1.46e-02 -4.00e-03  1.15e-02  1.62e-02
## 1365 -3.48e-02  2.00e-02  8.94e-03 -4.99e-03  1.74e-02 -2.09e-02  2.51e-02
## 1366 -3.54e-02  2.47e-02 -2.91e-02  1.57e-02  3.20e-02 -2.43e-02 -7.51e-05
## 1367  7.82e-03 -1.14e-02 -9.54e-04 -7.21e-03  4.79e-03  4.62e-03  7.61e-04
## 1368  8.41e-03  1.70e-02 -6.96e-03  1.50e-02 -7.21e-03  3.92e-06  1.76e-03
## 1369 -3.99e-02  3.72e-03 -2.16e-02 -1.01e-02  1.42e-02 -1.01e-02 -7.76e-03
## 1370  7.49e-02 -5.85e-02 -3.33e-02  2.34e-02 -1.64e-02 -4.87e-02  3.50e-02
## 1371 -5.02e-03  5.96e-03  6.66e-03  1.99e-02 -6.37e-03  5.96e-03 -9.45e-03
## 1372  5.58e-03 -1.25e-03  1.72e-02 -2.91e-03 -1.66e-03  3.55e-03  9.49e-06
## 1373  6.56e-03 -4.57e-02  1.20e-02 -1.00e-02 -9.41e-03  5.60e-02 -3.17e-02
## 1374 -2.65e-02 -7.00e-03 -2.69e-02 -5.47e-03 -4.42e-02 -1.88e-02  4.49e-02
## 1375 -1.20e-02  6.71e-03 -1.54e-02  8.90e-03  1.49e-02  2.72e-03  2.10e-03
## 1376  6.70e-02 -1.25e-02  2.84e-02  1.80e-02  7.33e-03 -2.49e-02 -1.41e-02
## 1377 -1.55e-03  2.23e-03  9.33e-04  4.58e-03  9.82e-04 -1.59e-03 -8.74e-04
```

```
## 1378 -1.56e-03 -1.76e-04  2.68e-03  5.56e-04 -4.47e-03  4.53e-04  1.74e-03
## 1379 -2.93e-02  1.65e-02 -2.35e-02 -9.22e-03  1.66e-02  5.70e-03 -4.13e-03
## 1380 -2.86e-02 -4.72e-02 -2.81e-02  2.00e-02  1.93e-02 -2.44e-02 -1.76e-03
## 1381  1.07e-02 -3.48e-03  1.92e-02  4.56e-02 -3.59e-03  7.76e-04  1.18e-02
## 1382  7.79e-03  6.91e-03 -2.87e-03  1.43e-02 -1.90e-03  2.44e-03  2.92e-03
## 1383 -3.41e-02  1.24e-02  4.95e-03 -3.59e-02 -2.88e-03  1.13e-02 -7.08e-03
## 1384  5.67e-04 -2.37e-03  6.60e-04 -6.09e-04 -1.18e-03 -5.24e-04  9.02e-04
## 1385  7.85e-03 -2.16e-02  5.40e-03  1.63e-02 -2.79e-02 -1.77e-02  1.12e-02
## 1386 -1.84e-03  1.95e-03 -2.51e-03 -2.89e-03  1.77e-03  3.39e-03 -1.44e-03
## 1387  1.24e-02  1.24e-02 -2.01e-02  3.05e-02  3.03e-02 -2.39e-02 -4.29e-02
## 1388  8.30e-03  1.47e-02  7.65e-03  2.36e-02 -7.47e-03 -5.55e-03  1.12e-02
## 1389 -2.41e-03  2.43e-03  6.14e-04  1.59e-03  2.01e-03 -3.72e-03 -1.22e-04
## 1390  1.28e-02 -3.42e-02  3.40e-04 -3.10e-03  1.55e-02 -9.53e-03 -3.50e-02
## 1391 -5.56e-02 -6.55e-02  2.98e-02 -6.17e-02  1.98e-02 -6.18e-02 -1.75e-02
## 1392  1.88e-02  1.33e-02 -1.12e-01  2.88e-02  2.26e-02  9.70e-03 -2.24e-03
## 1393 -1.01e-02  7.30e-03  2.03e-03 -2.39e-03  1.76e-03 -3.79e-03  8.34e-03
## 1394  3.70e-04  1.96e-04  5.90e-05 -1.23e-04  3.49e-04 -5.29e-04  6.04e-04
## 1395  8.28e-03 -2.48e-02  2.91e-03 -3.73e-03  2.60e-04  5.92e-03  1.06e-04
## 1396  8.74e-02 -6.85e-02 -2.45e-03  2.27e-02 -5.04e-03  2.37e-02 -7.21e-02
## 1397  6.31e-02 -2.92e-02 -3.60e-02 -3.69e-02 -3.71e-02  6.41e-03  1.89e-02
## 1398  5.17e-03  1.13e-02  1.23e-02  1.01e-02  1.85e-03 -1.26e-03 -2.60e-03
## 1399 -1.77e-03  3.26e-03 -1.16e-03  7.09e-04 -7.67e-04  6.68e-04 -1.09e-03
## 1400 -1.17e-03  1.23e-03 -5.12e-03  6.99e-04 -1.05e-03  3.46e-03 -4.68e-03
## 1401 -3.72e-02  2.81e-02  9.03e-03 -1.16e-02 -2.63e-02  1.50e-02  6.45e-03
## 1402 -6.55e-03 -3.16e-03 -8.85e-03 -9.29e-04  5.73e-03 -8.42e-03  5.35e-03
## 1403 -3.63e-02  2.79e-02  1.81e-02 -1.07e-02 -8.28e-03  1.43e-02 -3.04e-03
## 1404  1.03e-02  1.40e-02  7.47e-03 -4.93e-03 -1.62e-02  2.17e-02 -4.13e-02
## 1405  5.55e-03  7.73e-03 -9.50e-03 -2.35e-03 -1.90e-02 -1.35e-03  1.07e-02
## 1406 -3.76e-03  1.12e-02 -7.64e-04  1.53e-02 -2.86e-03 -1.10e-03  1.54e-04
## 1407 -4.92e-02 -3.38e-02  5.17e-02 -1.12e-02 -9.81e-03  1.58e-02  5.94e-03
## 1408  1.34e-02  2.04e-02  1.08e-02  3.06e-02 -2.50e-04 -7.84e-03  8.63e-04
## 1409  6.28e-03  5.28e-03 -5.44e-03 -1.68e-02 -1.70e-03  7.52e-03  2.46e-04
## 1410  5.28e-03  8.36e-03  5.16e-03 -1.17e-02  2.60e-03 -9.44e-03 -1.50e-02
## 1411  4.19e-04  3.19e-04 -5.01e-04 -3.26e-04  9.90e-04 -2.40e-04 -4.70e-04
## 1412  6.97e-03  2.81e-03 -1.29e-02 -4.03e-03  1.76e-03  1.19e-02 -4.07e-03
## 1413 -8.64e-05 -7.51e-05  1.39e-04 -1.48e-04  7.62e-05  9.90e-05 -1.58e-04
## 1414 -2.64e-02 -2.01e-02 -1.82e-02  1.84e-02  8.20e-03 -1.87e-04  2.31e-03
## 1415  5.26e-03 -2.27e-02 -1.33e-02 -4.20e-03  1.59e-02 -1.81e-02 -2.74e-02
## 1416  5.10e-03  9.03e-03  7.81e-03  9.47e-03 -2.46e-03 -2.04e-04  3.16e-04
## 1417 -4.74e-03 -4.30e-05  5.63e-03  1.47e-03  1.83e-04  1.72e-02 -1.18e-03
## 1418  5.18e-03 -1.02e-02  4.81e-03 -4.64e-03  4.68e-04  1.94e-03 -2.55e-03
## 1419  1.18e-02  2.72e-02  8.38e-03 -9.44e-03  1.37e-02  2.98e-02 -4.21e-02
## 1420 -3.51e-02 -1.39e-02  1.69e-02  2.67e-02 -4.49e-04 -5.89e-03  2.87e-03
## 1421 -3.11e-03  7.52e-03  4.24e-03  1.44e-03  2.70e-03  6.86e-04 -4.56e-04
## 1422 -4.66e-03  6.89e-03 -1.75e-02 -2.64e-02 -6.35e-03 -1.57e-03  5.23e-04
## 1423 -2.98e-02  2.46e-02  4.24e-03 -1.01e-02  5.81e-03  5.37e-03 -1.17e-02
## 1424  7.36e-03  9.26e-03 -5.93e-03 -1.96e-02  4.08e-04  2.52e-03 -1.62e-03
## 1425  2.93e-03 -5.79e-03  2.64e-03 -2.13e-03 -1.59e-03 -2.04e-03  7.45e-03
## 1426 -4.51e-02  1.61e-02 -4.10e-03 -8.43e-03 -4.89e-03 -3.00e-02 -5.84e-02
## 1427  2.68e-02  2.35e-02  2.67e-03 -1.31e-02 -2.91e-02  1.60e-02 -3.45e-02
```

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## 1428   5.72e-03 -9.50e-03 -3.85e-03  9.22e-03 -9.96e-04  4.06e-03 -6.80e-04
## 1429   9.45e-03  6.24e-03  7.18e-03 -5.19e-03  6.34e-03  8.43e-04 -9.97e-03
## 1430   6.58e-03  9.85e-03 -2.50e-02 -4.58e-03  1.83e-02 -1.33e-02  7.82e-03
## 1431 -2.70e-04 -5.83e-04  6.90e-05  3.22e-05 -2.72e-04  1.85e-03 -1.41e-03
## 1432 -4.32e-03  8.47e-03 -1.78e-03  1.29e-03  1.73e-03  7.90e-03  6.51e-04
## 1433 -7.93e-03 -1.33e-02  3.00e-03 -1.28e-03 -1.54e-03 -5.63e-03 -6.44e-04
## 1434 -4.11e-02 -4.61e-02  4.70e-03  2.34e-02 -1.74e-03  6.04e-03  8.87e-03
## 1435   2.43e-03  1.37e-03 -2.73e-03  3.25e-03 -3.40e-03 -7.63e-03  4.29e-03
## 1436 -4.26e-02  2.53e-02  2.33e-02 -1.28e-02 -8.07e-03 -6.74e-03  7.61e-04
## 1437 -7.04e-02  4.45e-02 -5.24e-03 -1.13e-02  1.14e-02 -3.79e-03 -8.53e-03
## 1438 -1.72e-03 -1.34e-03  2.92e-04 -3.27e-03 -1.12e-03 -3.26e-03 -8.23e-04
## 1439 -4.18e-02  6.15e-02 -4.35e-03 -6.50e-02  1.97e-02 -3.15e-02  1.71e-02
## 1440   2.34e-03 -5.76e-03  4.94e-03 -8.98e-04 -5.98e-04 -4.88e-03 -1.80e-04
## 1441   4.34e-03  2.34e-03 -1.28e-02 -1.53e-03  2.72e-03  1.17e-03  2.06e-03
## 1442 -1.14e-02  3.01e-02 -3.25e-02 -2.50e-02  1.43e-03  4.69e-02 -3.49e-02
## 1443   9.91e-02 -2.60e-02 -7.26e-03  1.10e-01 -2.25e-02 -1.36e-02  3.51e-02
## 1444 -1.62e-03 -3.63e-03 -3.63e-03 -3.94e-03  5.00e-03 -8.71e-03 -3.84e-03
## 1445 -5.98e-02 -9.81e-02 -1.53e-02 -1.97e-01 -9.57e-02  8.68e-02  1.60e-01
## 1446   4.33e-03 -1.79e-02  4.95e-03 -3.19e-03 -1.89e-02  9.55e-03  2.01e-02
## 1447   2.17e-03 -4.71e-03  2.48e-03 -9.18e-04  1.11e-03 -2.03e-03  2.59e-03
## 1448 -2.07e-04  8.23e-04  2.22e-04 -4.31e-04 -4.83e-04  3.91e-04  7.81e-04
## 1449   2.03e-03  3.44e-03 -8.75e-04 -1.02e-03  1.80e-03 -1.03e-03  2.08e-03
## 1450   1.16e-02  3.68e-03  7.59e-03 -4.41e-03 -9.34e-03  3.66e-03  2.13e-04
## 1451 -4.11e-02 -6.36e-03  3.78e-02 -1.51e-02 -2.78e-02  6.91e-02  1.02e-02
## 1452 -3.38e-04 -9.87e-04 -4.34e-04  2.91e-04 -2.34e-04  2.37e-04 -7.53e-04
## 1453 -5.71e-02 -6.18e-02 -5.95e-02  2.69e-02  6.04e-02  1.69e-02 -5.05e-02
## 1454   7.86e-03  7.39e-03  7.69e-03  1.20e-02 -1.21e-02 -3.26e-03  7.05e-03
## 1455   8.72e-03  5.08e-04  1.26e-02 -2.91e-03 -8.81e-03 -3.07e-03  6.63e-03
## 1456   1.10e-02  6.82e-03 -1.55e-03 -6.92e-03  7.52e-03  1.44e-03 -9.80e-03
## 1457 -3.92e-02  7.49e-03  8.58e-03 -5.04e-02 -5.76e-02  3.11e-02  2.62e-02
## 1458 -7.96e-04 -4.12e-04  3.86e-03  5.67e-04 -2.41e-04 -3.48e-05 -5.44e-04
## 1459   8.69e-03  1.20e-02  7.28e-03 -3.44e-03 -4.06e-03 -4.68e-03  1.78e-03
## 1460 -3.85e-02  1.49e-02 -2.05e-02 -8.81e-03  7.58e-03  2.82e-03  1.15e-02
## 1461   2.51e-02  1.32e-02  8.80e-03  8.21e-02  7.41e-04 -1.84e-02  2.42e-02
## 1462   6.89e-02 -3.18e-02  3.94e-02  1.90e-02 -3.91e-02  8.74e-03  1.84e-02
## 1463   8.47e-03  1.36e-02  1.28e-03  1.41e-02 -1.92e-02  9.48e-04 -1.45e-02
## 1464   4.76e-03 -1.23e-02  4.05e-03 -3.51e-03 -3.15e-03  6.25e-03  1.06e-02
## 1465   1.39e-02 -1.43e-02 -5.70e-03 -5.52e-03 -1.64e-02  6.24e-04  6.61e-03
## 1466   3.02e-03 -1.86e-03 -9.27e-03 -1.74e-03  3.57e-04  2.91e-03  1.84e-03
## 1467   1.06e-03  8.52e-05  3.06e-03 -1.89e-04  1.49e-03 -1.66e-03  1.61e-03
## 1468 -3.80e-02 -3.20e-02  7.96e-03 -6.85e-03 -1.68e-02  1.38e-02  1.24e-02
## 1469   2.59e-03  1.27e-03 -1.44e-03  3.88e-03  1.43e-03 -6.77e-04  4.83e-03
## 1470   7.94e-05  1.31e-04  8.51e-05 -2.73e-04 -2.98e-05  3.27e-06 -1.24e-06
##       dfb.YWCM    dffit cov.r   cook.d     hat inf
## 1       3.64e-02  0.259585 0.964 3.06e-03 0.01497
## 2      -4.66e-03 -0.041425 1.029 7.80e-05 0.01529
## 3      -8.09e-03  0.193979 0.972 1.71e-03 0.01040
## 4       6.00e-02 -0.121278 1.017 6.69e-04 0.01569
## 5       7.27e-04 -0.065153 1.017 1.93e-04 0.00894
## 6      -4.81e-03 -0.048187 1.024 1.06e-04 0.01177
```

```
## 7      8.30e-03 -0.092227 1.028 3.87e-04 0.01863
## 8      2.86e-03 -0.029370 1.028 3.92e-05 0.01313
## 9     -1.85e-02 -0.077837 1.027 2.76e-04 0.01677
## 10    -5.72e-03 -0.033094 1.029 4.98e-05 0.01430
## 11     3.39e-03 -0.034107 1.021 5.29e-05 0.00807
## 12    -4.04e-02 -0.122651 1.009 6.84e-04 0.01234
## 13     1.38e-03 -0.099486 1.019 4.50e-04 0.01401
## 14    -8.64e-04 -0.025127 1.026 2.87e-05 0.01094
## 15     9.30e-03  0.147284 0.995 9.85e-04 0.01053
## 16    -3.52e-03 -0.033989 1.033 5.25e-05 0.01805
## 17    -1.92e-02 -0.114372 1.015 5.95e-04 0.01392
## 18     6.32e-03 -0.071836 1.033 2.35e-04 0.02103
## 19    -7.46e-03  0.025050 1.035 2.85e-05 0.01969
## 20    -1.67e-03 -0.094272 1.013 4.04e-04 0.01060
## 21     3.98e-04 -0.016357 1.035 1.22e-05 0.01940
## 22    -5.49e-03  0.238092 0.952 2.57e-03 0.01119     *
## 23    -2.96e-02 -0.057183 1.025 1.49e-04 0.01278
## 24     8.54e-03 -0.073436 1.016 2.45e-04 0.00929
## 25     5.09e-03  0.179690 0.954 1.46e-03 0.00698     *
## 26    -4.02e-03  0.089225 1.025 3.62e-04 0.01651
## 27     2.52e-02  0.116183 1.030 6.14e-04 0.02257
## 28     1.06e-02 -0.021303 1.022 2.06e-05 0.00744
## 29     5.61e-03  0.009124 1.040 3.79e-06 0.02335
## 30     5.10e-03 -0.072692 1.029 2.40e-04 0.01746
## 31     6.90e-03 -0.036181 1.019 5.95e-05 0.00688
## 32    -4.12e-03 -0.033164 1.026 5.00e-05 0.01215
## 33    -3.17e-02 -0.079172 1.024 2.85e-04 0.01509
## 34    -5.33e-02  0.480004 0.878 1.04e-02 0.02060     *
## 35    -3.32e-02  0.196923 0.969 1.76e-03 0.01023
## 36     3.06e-03  0.034644 1.026 5.46e-05 0.01159
## 37     9.83e-03  0.244891 0.969 2.72e-03 0.01465
## 38     1.52e-04  0.004862 1.024 1.08e-06 0.00835
## 39     1.38e-02 -0.136263 1.000 8.44e-04 0.01080
## 40     2.47e-03 -0.036186 1.027 5.96e-05 0.01270
## 41     1.26e-03 -0.011022 1.024 5.53e-06 0.00871
## 42     5.14e-03 -0.041120 1.025 7.69e-05 0.01182
## 43     2.37e-03  0.189476 0.999 1.63e-03 0.01634
## 44    -3.87e-03 -0.037561 1.027 6.42e-05 0.01259
## 45     1.52e-03 -0.041848 1.027 7.97e-05 0.01341
## 46    -1.44e-01  0.462472 0.902 9.67e-03 0.02249     *
## 47    -9.75e-03 -0.072506 1.027 2.39e-04 0.01632
## 48     8.67e-03 -0.056190 1.017 1.44e-04 0.00798
## 49    -3.27e-02 -0.124732 1.020 7.07e-04 0.01756
## 50    -2.21e-05  0.019974 1.026 1.81e-05 0.01138
## 51    -2.62e-02  0.295201 0.993 3.95e-03 0.02624
## 52     4.19e-03  0.168708 0.979 1.29e-03 0.00941
## 53    -1.68e-03 -0.098987 1.019 4.45e-04 0.01405
## 54    -1.63e-02 -0.128302 1.017 7.48e-04 0.01663
## 55     2.43e-02 -0.135314 1.010 8.32e-04 0.01399
## 56    -3.57e-02 -0.167907 1.026 1.28e-03 0.02622
```

```
## 57     -1.18e-02 -0.066496 1.027 2.01e-04 0.01573
## 58     -4.87e-03 -0.147340 1.003 9.86e-04 0.01308
## 59      8.37e-03  0.039148 1.026 6.97e-05 0.01194
## 60     -1.41e-03 -0.004482 1.029 9.14e-07 0.01308
## 61     -1.91e-02 -0.095126 1.023 4.11e-04 0.01582
## 62     -3.73e-02 -0.128437 1.030 7.50e-04 0.02423
## 63      2.18e-02 -0.188936 1.033 1.62e-03 0.03283
## 64      2.36e-02 -0.093955 1.043 4.01e-04 0.03043
## 65     -2.98e-03  0.012863 1.031 7.53e-06 0.01490
## 66     -1.17e-03 -0.025111 1.029 2.87e-05 0.01367
## 67      1.09e-02 -0.112485 1.011 5.75e-04 0.01166
## 68      2.73e-03 -0.024448 1.031 2.72e-05 0.01571
## 69      6.11e-03 -0.088584 1.013 3.57e-04 0.00980
## 70     -1.30e-02  0.192726 0.968 1.69e-03 0.00978
## 71     -2.11e-03 -0.117101 1.024 6.23e-04 0.01880
## 72     -5.52e-04 -0.010216 1.024 4.75e-06 0.00860
## 73      1.23e-02 -0.058246 1.015 1.54e-04 0.00684
## 74     -3.54e-03 -0.006726 1.023 2.06e-06 0.00792
## 75      2.08e-03 -0.016274 1.026 1.20e-05 0.01032
## 76     -1.30e-03 -0.007417 1.025 2.50e-06 0.00997
## 77      9.51e-03 -0.059785 1.029 1.63e-04 0.01636
## 78      2.75e-05 -0.088081 1.025 3.53e-04 0.01631
## 79      2.81e-03 -0.066472 1.026 2.01e-04 0.01511
## 80      4.51e-03 -0.072399 1.020 2.38e-04 0.01151
## 81      5.93e-02 -0.101529 1.021 4.69e-04 0.01562
## 82     -2.54e-03 -0.061625 1.018 1.73e-04 0.00919
## 83      1.55e-04 -0.001900 1.031 1.64e-07 0.01531
## 84     -6.47e-03 -0.062056 1.037 1.75e-04 0.02342
## 85      2.27e-04 -0.037756 1.022 6.48e-05 0.00907
## 86      4.31e-03 -0.038739 1.054 6.83e-05 0.03700   *
## 87      6.61e-03 -0.053599 1.020 1.31e-04 0.00908
## 88      1.95e-03  0.032400 1.029 4.77e-05 0.01409
## 89     -1.12e-03 -0.020105 1.033 1.84e-05 0.01724
## 90      5.18e-02  0.300792 0.907 4.09e-03 0.01097   *
## 91     -1.76e-02 -0.106727 1.037 5.18e-04 0.02735
## 92      7.85e-02 -0.167856 1.021 1.28e-03 0.02340
## 93     -5.54e-03 -0.087030 1.016 3.44e-04 0.01121
## 94      2.33e-02 -0.178165 1.006 1.44e-03 0.01771
## 95     -5.42e-04 -0.034535 1.019 5.42e-05 0.00665
## 96     -8.41e-04 -0.012513 1.033 7.12e-06 0.01683
## 97      2.90e-03 -0.051759 1.025 1.22e-04 0.01271
## 98      1.72e-04  0.006491 1.032 1.92e-06 0.01590
## 99     -1.50e-02  0.037660 1.070 6.45e-05 0.05155   *
## 100     1.74e-03 -0.027205 1.039 3.37e-05 0.02294
## 101    -7.68e-03  0.222824 0.957 2.25e-03 0.01063
## 102     9.83e-03 -0.067363 1.015 2.06e-04 0.00830
## 103    -1.31e-02  0.158862 0.996 1.15e-03 0.01216
## 104     1.12e-04 -0.032695 1.028 4.86e-05 0.01352
## 105    -2.61e-03  0.036460 1.037 6.05e-05 0.02166
## 106     3.38e-03  0.104857 1.036 5.00e-04 0.02573
```

```
## 107   -2.76e-02 -0.101832 1.029 4.72e-04 0.02077
## 108   -1.19e-02  0.165310 0.980 1.24e-03 0.00927
## 109    2.26e-03 -0.029690 1.023 4.01e-05 0.00872
## 110    8.39e-03 -0.073576 1.011 2.46e-04 0.00708
## 111    1.38e-02 -0.196371 1.029 1.75e-03 0.03116
## 112    1.21e-02  0.188551 1.005 1.61e-03 0.01859
## 113   -6.25e-03 -0.067091 1.046 2.05e-04 0.03170   *
## 114    8.39e-03 -0.046561 1.018 9.86e-05 0.00725
## 115    5.47e-03 -0.040291 1.022 7.38e-05 0.00934
## 116    3.20e-04 -0.011490 1.026 6.00e-06 0.01016
## 117   -7.19e-03 -0.061921 1.023 1.74e-04 0.01230
## 118   -5.69e-04 -0.001977 1.028 1.78e-07 0.01251
## 119    3.09e-03 -0.027848 1.027 3.53e-05 0.01235
## 120   -3.14e-03 -0.063650 1.039 1.84e-04 0.02495
## 121   -3.30e-02 -0.142245 1.032 9.20e-04 0.02679
## 122    4.28e-03  0.021693 1.031 2.14e-05 0.01606
## 123    1.06e-03  0.271242 0.968 3.34e-03 0.01695
## 124   -1.55e-03 -0.007710 1.046 2.70e-06 0.02959   *
## 125    4.69e-02  0.219545 0.985 2.19e-03 0.01576
## 126    6.02e-03 -0.062902 1.015 1.80e-04 0.00753
## 127   -3.97e-01  0.794618 0.955 2.85e-02 0.06791   *
## 128   -1.68e-02  0.164781 0.993 1.23e-03 0.01195
## 129    2.20e-03 -0.025816 1.024 3.03e-05 0.00915
## 130   -3.55e-03 -0.015245 1.028 1.06e-05 0.01245
## 131    4.10e-03 -0.122211 1.026 6.79e-04 0.02082
## 132    4.48e-03 -0.052229 1.024 1.24e-04 0.01186
## 133    9.84e-03  0.177655 0.993 1.43e-03 0.01318
## 134   -4.89e-03 -0.025735 1.026 3.01e-05 0.01137
## 135   -5.09e-03 -0.031507 1.027 4.52e-05 0.01261
## 136    5.19e-03 -0.028947 1.024 3.81e-05 0.00947
## 137    2.85e-02  0.280777 0.961 3.57e-03 0.01642
## 138    1.71e-03  0.028560 1.026 3.71e-05 0.01106
## 139   -4.81e-03 -0.109065 1.017 5.41e-04 0.01423
## 140   -9.68e-04 -0.070522 1.022 2.26e-04 0.01280
## 141    1.00e-02  0.277390 0.954 3.49e-03 0.01496
## 142    5.15e-03 -0.057484 1.027 1.50e-04 0.01496
## 143    6.12e-03 -0.116316 1.019 6.15e-04 0.01592
## 144   -2.95e-03 -0.083209 1.010 3.15e-04 0.00775
## 145   -3.33e-03 -0.017790 1.034 1.44e-05 0.01831
## 146    1.96e-03 -0.037413 1.024 6.37e-05 0.01058
## 147    8.81e-03 -0.069257 1.018 2.18e-04 0.00963
## 148   -1.48e-02 -0.066059 1.035 1.98e-04 0.02198
## 149   -7.01e-03 -0.036904 1.024 6.19e-05 0.01011
## 150    1.64e-02 -0.087197 1.009 3.46e-04 0.00808
## 151   -1.40e-02 -0.047192 1.037 1.01e-04 0.02277
## 152   -7.70e-04  0.017969 1.026 1.47e-05 0.01123
## 153    2.63e-03 -0.104111 1.031 4.93e-04 0.02210
## 154    1.07e-02  0.026780 1.044 3.26e-05 0.02752
## 155   -6.07e-03 -0.051029 1.023 1.18e-04 0.01107
## 156    2.05e-02  0.078828 1.028 2.83e-04 0.01760
```

```
## 157     2.37e-03 -0.033296 1.024 5.04e-05 0.01012
## 158     6.96e-03 -0.147146 1.011 9.84e-04 0.01599
## 159     1.40e-02  0.034880 1.027 5.53e-05 0.01254
## 160     5.29e-03 -0.039795 1.021 7.20e-05 0.00822
## 161     2.24e-05 -0.032166 1.026 4.71e-05 0.01152
## 162     1.52e-03 -0.032853 1.032 4.91e-05 0.01730
## 163     6.71e-03 -0.061931 1.024 1.74e-04 0.01313
## 164    -4.69e-03 -0.054385 1.037 1.35e-04 0.02271
## 165     6.78e-04 -0.106621 1.021 5.17e-04 0.01576
## 166    -1.99e-03 -0.019277 1.031 1.69e-05 0.01591
## 167    -2.51e-03 -0.011508 1.028 6.02e-06 0.01208
## 168     1.92e-03 -0.006713 1.027 2.05e-06 0.01157
## 169    -1.51e-02 -0.045444 1.029 9.39e-05 0.01525
## 170    -1.88e-03 -0.044992 1.020 9.21e-05 0.00797
## 171     2.88e-02 -0.115623 1.000 6.07e-04 0.00850
## 172    -1.33e-02  0.224275 0.998 2.28e-03 0.02015
## 173     4.34e-02 -0.130548 1.022 7.75e-04 0.01954
## 174    -7.32e-04 -0.004163 1.036 7.88e-07 0.01975
## 175     1.40e-03 -0.075676 1.026 2.60e-04 0.01589
## 176    -2.73e-03 -0.101937 1.024 4.72e-04 0.01706
## 177    -5.79e-04 -0.035800 1.024 5.83e-05 0.01014
## 178    -3.34e-02  0.225827 0.970 2.31e-03 0.01297
## 179     1.85e-02 -0.046624 1.045 9.89e-05 0.02987
## 180     4.45e-03 -0.043338 1.021 8.54e-05 0.00877
## 181     2.61e-03 -0.089036 1.020 3.60e-04 0.01338
## 182     4.33e-03 -0.076766 1.017 2.68e-04 0.01024
## 183    -1.50e-02  0.188079 0.990 1.61e-03 0.01361
## 184    -6.87e-04 -0.031441 1.027 4.50e-05 0.01236
## 185     5.99e-04  0.017846 1.034 1.45e-05 0.01863
## 186    -5.17e-04 -0.005035 1.022 1.15e-06 0.00620
## 187    -1.62e-04  0.038824 1.027 6.86e-05 0.01324
## 188     1.80e-02  0.094070 1.031 4.02e-04 0.02138
## 189    -3.80e-03 -0.013796 1.033 8.66e-06 0.01741
## 190     1.39e-03 -0.003060 1.033 4.26e-07 0.01681
## 191    -2.75e-02  0.050352 1.039 1.15e-04 0.02418
## 192     1.49e-02 -0.054295 1.022 1.34e-04 0.01063
## 193     8.41e-03  0.165687 0.978 1.25e-03 0.00899
## 194    -1.26e-02  0.099205 1.029 4.48e-04 0.02023
## 195    -8.23e-04  0.010453 1.040 4.97e-06 0.02350
## 196    -1.90e-02 -0.124205 1.014 7.01e-04 0.01475
## 197     2.07e-02 -0.113355 1.011 5.84e-04 0.01184
## 198    -1.82e-03  0.013801 1.029 8.66e-06 0.01325
## 199    -8.19e-04  0.007093 1.023 2.29e-06 0.00784
## 200     1.11e-03  0.005454 1.031 1.35e-06 0.01518
## 201     2.62e-02 -0.111566 1.015 5.66e-04 0.01329
## 202     3.03e-03  0.013915 1.037 8.81e-06 0.02132
## 203     3.22e-02 -0.115610 1.017 6.08e-04 0.01473
## 204    -2.11e-02 -0.066788 1.030 2.03e-04 0.01786
## 205    -2.10e-02  0.215470 0.983 2.11e-03 0.01478
## 206     1.27e-01  0.407781 0.916 7.52e-03 0.02002    *
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## 207    8.27e-03 -0.087937 1.018 3.52e-04 0.01238
## 208   -3.40e-02 -0.092792 1.017 3.91e-04 0.01223
## 209   -2.76e-05  0.002372 1.033 2.56e-07 0.01751
## 210    1.05e-03  0.019059 1.026 1.65e-05 0.01095
## 211    2.94e-02  0.351863 0.917 5.60e-03 0.01575    *
## 212   -2.07e-03 -0.018254 1.032 1.52e-05 0.01671
## 213   -1.40e-02 -0.065785 1.032 1.97e-04 0.01955
## 214   -2.48e-03 -0.027187 1.031 3.36e-05 0.01549
## 215    2.48e-02  0.191110 0.974 1.66e-03 0.01047
## 216    2.02e-03 -0.079351 1.021 2.86e-04 0.01292
## 217   -4.92e-02  0.186206 0.996 1.57e-03 0.01494
## 218    4.61e-02  0.209057 0.929 1.98e-03 0.00686    *
## 219    1.78e-03 -0.021994 1.037 2.20e-05 0.02115
## 220    3.13e-03  0.014077 1.026 9.01e-06 0.01082
## 221   -6.84e-05  0.000511 1.027 1.19e-08 0.01176
## 222    9.16e-03 -0.054938 1.019 1.37e-04 0.00882
## 223   -1.05e-02 -0.075482 1.027 2.59e-04 0.01622
## 224    3.70e-03  0.008665 1.030 3.42e-06 0.01418
## 225   -1.55e-03 -0.022850 1.032 2.37e-05 0.01641
## 226    7.85e-04 -0.015605 1.033 1.11e-05 0.01690
## 227   -7.21e-03 -0.040672 1.030 7.52e-05 0.01601
## 228    1.96e-02 -0.036540 1.035 6.07e-05 0.02026
## 229   -3.97e-03 -0.018048 1.030 1.48e-05 0.01416
## 230   -3.06e-02  0.154590 0.987 1.09e-03 0.00956
## 231   -2.76e-03 -0.056824 1.028 1.47e-04 0.01504
## 232    2.25e-02  0.094257 1.028 4.04e-04 0.01910
## 233   -4.55e-04 -0.024794 1.029 2.80e-05 0.01405
## 234    3.23e-02  0.107138 1.030 5.22e-04 0.02156
## 235    1.57e-02  0.225412 0.953 2.30e-03 0.01033    *
## 236   -3.97e-04  0.025504 1.033 2.96e-05 0.01757
## 237    3.51e-02  0.338584 0.920 5.19e-03 0.01503    *
## 238    1.11e-02 -0.197986 1.046 1.78e-03 0.04268    *
## 239    2.55e-03 -0.024559 1.021 2.74e-05 0.00709
## 240   -2.87e-04  0.181215 0.987 1.49e-03 0.01220
## 241   -6.09e-05  0.003121 1.024 4.43e-07 0.00889
## 242    1.80e-04 -0.005376 1.032 1.31e-06 0.01606
## 243    8.86e-03 -0.062229 1.031 1.76e-04 0.01832
## 244   -8.83e-04 -0.009873 1.030 4.43e-06 0.01430
## 245   -6.14e-03  0.103489 1.048 4.87e-04 0.03577    *
## 246   -2.77e-03 -0.045159 1.031 9.28e-05 0.01662
## 247   -1.66e-03 -0.028583 1.020 3.72e-05 0.00655
## 248   -4.76e-03 -0.018282 1.025 1.52e-05 0.00955
## 249   -1.94e-04 -0.066163 1.024 1.99e-04 0.01310
## 250    7.51e-04 -0.027726 1.026 3.50e-05 0.01119
## 251   -3.01e-02  0.292770 0.938 3.88e-03 0.01377    *
## 252    6.59e-03 -0.094039 1.029 4.02e-04 0.01973
## 253   -3.79e-03 -0.032069 1.019 4.68e-05 0.00617
## 254    2.61e-03 -0.106217 1.011 5.13e-04 0.01118
## 255   -5.78e-06  0.006144 1.026 1.72e-06 0.01035
## 256    4.15e-03 -0.040679 1.020 7.53e-05 0.00779
```

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## 257   -3.30e-02 -0.123689 1.018 6.95e-04 0.01626
## 258    5.78e-06  0.044485 1.034 9.00e-05 0.01967
## 259    4.14e-04 -0.006936 1.032 2.19e-06 0.01590
## 260    1.47e-02  0.229558 0.983 2.39e-03 0.01615
## 261    3.17e-04 -0.082484 1.027 3.09e-04 0.01687
## 262   -9.82e-04  0.031823 1.031 4.61e-05 0.01584
## 263   -2.92e-03 -0.090742 1.022 3.74e-04 0.01508
## 264   -3.12e-02 -0.136881 1.025 8.52e-04 0.02176
## 265   -2.35e-02  0.219327 0.970 2.18e-03 0.01235
## 266    5.03e-03 -0.066868 1.018 2.03e-04 0.00950
## 267   -3.06e-02 -0.079804 1.031 2.90e-04 0.02017
## 268   -3.20e-04 -0.004382 1.034 8.73e-07 0.01789
## 269   -4.09e-03 -0.028130 1.028 3.60e-05 0.01361
## 270    5.90e-03  0.040652 1.033 7.52e-05 0.01835
## 271    8.90e-03 -0.077046 1.050 2.70e-04 0.03567    *
## 272    8.41e-02  0.349781 0.981 5.55e-03 0.02836
## 273    2.99e-04  0.002583 1.027 3.03e-07 0.01159
## 274   -2.99e-03  0.011813 1.026 6.35e-06 0.01029
## 275    1.64e-02 -0.072447 1.021 2.39e-04 0.01212
## 276    1.09e-03 -0.052783 1.034 1.27e-04 0.02049
## 277    1.06e-02 -0.037208 1.032 6.30e-05 0.01699
## 278   -4.56e-02 -0.182115 1.023 1.51e-03 0.02624
## 279    1.72e-03 -0.057697 1.031 1.51e-04 0.01759
## 280    2.04e-03  0.016326 1.030 1.21e-05 0.01475
## 281   -3.06e-03 -0.039969 1.027 7.27e-05 0.01323
## 282   -9.43e-04  0.002050 1.044 1.91e-07 0.02762
## 283   -1.59e-02 -0.057641 1.025 1.51e-04 0.01343
## 284   -1.22e-02 -0.055491 1.031 1.40e-04 0.01783
## 285    9.09e-03 -0.198845 0.984 1.79e-03 0.01325
## 286   -1.04e-03  0.003951 1.034 7.10e-07 0.01761
## 287   -2.64e-02  0.312954 0.986 4.44e-03 0.02598
## 288    1.87e-04  0.006124 1.025 1.71e-06 0.00949
## 289   -4.90e-03  0.203491 0.979 1.88e-03 0.01256
## 290    3.93e-03 -0.026266 1.023 3.14e-05 0.00857
## 291   -3.21e-03 -0.183447 1.012 1.53e-03 0.02090
## 292   -2.99e-02 -0.090904 1.022 3.76e-04 0.01481
## 293    3.72e-04 -0.066520 1.022 2.01e-04 0.01233
## 294   -2.55e-02  0.206466 0.972 1.93e-03 0.01167
## 295    5.65e-03 -0.123982 1.003 6.98e-04 0.01023
## 296    6.63e-04 -0.049008 1.034 1.09e-04 0.01941
## 297   -2.85e-02  0.200995 0.950 1.83e-03 0.00816    *
## 298   -2.41e-03 -0.010920 1.026 5.42e-06 0.01059
## 299    4.12e-03 -0.038768 1.026 6.84e-05 0.01245
## 300   -4.45e-04 -0.021629 1.031 2.13e-05 0.01544
## 301   -2.47e-03  0.005027 1.041 1.15e-06 0.02490
## 302    8.89e-03 -0.083498 1.011 3.17e-04 0.00824
## 303   -1.56e-02 -0.061755 1.024 1.73e-04 0.01317
## 304   -1.01e-03 -0.006978 1.030 2.22e-06 0.01445
## 305   -1.95e-02  0.072913 1.023 2.42e-04 0.01365
## 306    7.67e-04  0.003994 1.030 7.26e-07 0.01464
```

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## 307   -9.12e-04 -0.008528 1.023 3.31e-06 0.00797
## 308    3.49e-02 -0.072692 1.026 2.40e-04 0.01520
## 309    2.87e-03 -0.077994 1.038 2.77e-04 0.02493
## 310   -5.55e-03 -0.066519 1.018 2.01e-04 0.00941
## 311    2.22e-02 -0.097022 1.013 4.28e-04 0.01080
## 312    4.91e-03 -0.081060 1.043 2.99e-04 0.02974
## 313   -5.51e-04 -0.115395 1.019 6.05e-04 0.01614
## 314   -1.01e-02 -0.038234 1.027 6.65e-05 0.01326
## 315   -3.36e-03 -0.116660 1.022 6.19e-04 0.01807
## 316   -8.24e-03 -0.050508 1.027 1.16e-04 0.01407
## 317   -3.66e-02 -0.086199 1.025 3.38e-04 0.01592
## 318    1.01e-01  0.305988 0.929 4.24e-03 0.01360   *
## 319    1.59e-02 -0.128674 0.994 7.52e-04 0.00848
## 320   -7.40e-03 -0.129124 1.013 7.58e-04 0.01486
## 321   -6.18e-03 -0.085393 1.016 3.32e-04 0.01062
## 322    1.18e-02  0.043435 1.023 8.58e-05 0.01019
## 323   -2.29e-03 -0.012965 1.027 7.65e-06 0.01183
## 324    6.08e-03  0.196123 0.991 1.75e-03 0.01471
## 325    8.12e-03  0.025734 1.027 3.01e-05 0.01231
## 326   -1.14e-02 -0.050008 1.030 1.14e-04 0.01645
## 327    4.08e-02 -0.081755 1.038 3.04e-04 0.02568
## 328   -2.71e-02  0.234844 0.940 2.50e-03 0.00953   *
## 329    5.00e-02 -0.117326 1.014 6.26e-04 0.01382
## 330   -3.12e-03  0.051233 1.029 1.19e-04 0.01553
## 331    2.21e-02 -0.046663 1.032 9.90e-05 0.01825
## 332   -4.33e-03 -0.079450 1.024 2.87e-04 0.01491
## 333    2.99e-04 -0.071406 1.029 2.32e-04 0.01741
## 334    4.27e-03 -0.036122 1.023 5.93e-05 0.00972
## 335    3.79e-03  0.027462 1.027 3.43e-05 0.01251
## 336    2.85e-04 -0.124858 1.016 7.09e-04 0.01532
## 337    4.20e-02  0.205544 0.995 1.92e-03 0.01678
## 338    4.98e-04 -0.081877 1.012 3.05e-04 0.00854
## 339    3.02e-03 -0.006655 1.029 2.01e-06 0.01361
## 340   -2.47e-03 -0.010268 1.022 4.80e-06 0.00660
## 341    3.14e-03  0.023611 1.023 2.54e-05 0.00845
## 342   -1.21e-02 -0.046875 1.029 9.99e-05 0.01566
## 343   -2.57e-02 -0.087162 1.023 3.45e-04 0.01526
## 344   -2.38e-02 -0.093498 1.022 3.97e-04 0.01485
## 345   -9.04e-04 -0.001779 1.031 1.44e-07 0.01557
## 346    2.40e-03 -0.041773 1.027 7.94e-05 0.01297
## 347    1.58e-02 -0.114696 1.004 5.98e-04 0.00947
## 348    7.56e-03 -0.095383 1.026 4.14e-04 0.01819
## 349    3.71e-03 -0.074512 1.026 2.52e-04 0.01578
## 350   -1.61e-03  0.013879 1.029 8.76e-06 0.01316
## 351    1.77e-02 -0.078751 1.017 2.82e-04 0.01050
## 352   -8.11e-03 -0.018415 1.025 1.54e-05 0.01026
## 353    3.11e-03 -0.083009 1.030 3.13e-04 0.01948
## 354   -1.24e-02 -0.065726 1.024 1.96e-04 0.01354
## 355   -1.77e-03 -0.088454 1.028 3.56e-04 0.01861
## 356   -1.59e-03 -0.008139 1.023 3.01e-06 0.00784
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## 357    5.56e-03 -0.072322 1.025 2.38e-04 0.01457
## 358   -3.11e-03  0.119583 1.016 6.50e-04 0.01494
## 359    3.82e-04 -0.003853 1.029 6.75e-07 0.01304
## 360   -8.74e-03 -0.019319 1.032 1.70e-05 0.01643
## 361    4.78e-04  0.028716 1.025 3.75e-05 0.01072
## 362   -5.18e-03 -0.021758 1.026 2.15e-05 0.01108
## 363    6.87e-03 -0.101027 1.026 4.64e-04 0.01843
## 364   -1.82e-02  0.182068 0.974 1.50e-03 0.00968
## 365    2.14e-03 -0.028629 1.027 3.73e-05 0.01213
## 366   -1.94e-03  0.024454 1.032 2.72e-05 0.01669
## 367    4.38e-02  0.279201 0.970 3.54e-03 0.01816
## 368   -5.55e-04 -0.007405 1.027 2.49e-06 0.01106
## 369   -7.60e-02  0.187928 0.968 1.60e-03 0.00937
## 370   -4.16e-03 -0.143215 0.983 9.31e-04 0.00770
## 371   -4.02e-02  0.234052 0.951 2.48e-03 0.01074    *
## 372    1.88e-03 -0.047634 1.021 1.03e-04 0.00918
## 373    1.18e-02 -0.068227 1.013 2.12e-04 0.00732
## 374   -3.82e-04 -0.002603 1.027 3.08e-07 0.01115
## 375   -9.80e-03 -0.030822 1.023 4.32e-05 0.00884
## 376    1.55e-02 -0.063287 1.030 1.82e-04 0.01772
## 377    9.26e-03  0.039422 1.025 7.07e-05 0.01169
## 378   -1.15e-04 -0.007946 1.023 2.87e-06 0.00777
## 379    2.34e-02  0.302129 0.966 4.14e-03 0.01945
## 380    3.01e-03 -0.049568 1.032 1.12e-04 0.01788
## 381   -2.10e-03 -0.061326 1.025 1.71e-04 0.01366
## 382    6.26e-03 -0.038430 1.019 6.72e-05 0.00700
## 383   -5.00e-03  0.234891 0.961 2.50e-03 0.01228
## 384   -6.75e-04 -0.082147 1.013 3.07e-04 0.00901
## 385    4.80e-02 -0.084551 1.031 3.25e-04 0.02039
## 386   -2.03e-02  0.190167 0.988 1.64e-03 0.01333
## 387   -2.02e-02 -0.037324 1.049 6.34e-05 0.03229    *
## 388   -4.13e-04  0.007382 1.023 2.48e-06 0.00747
## 389    5.26e-03 -0.043829 1.024 8.74e-05 0.01116
## 390    5.18e-03 -0.155182 1.004 1.09e-03 0.01433
## 391    4.58e-03 -0.021312 1.033 2.07e-05 0.01710
## 392    5.44e-03 -0.045607 1.032 9.46e-05 0.01774
## 393    4.18e-04 -0.027894 1.032 3.54e-05 0.01645
## 394   -2.27e-04  0.013990 1.026 8.90e-06 0.01073
## 395   -1.55e-02 -0.048655 1.032 1.08e-04 0.01804
## 396    7.82e-04 -0.035647 1.027 5.78e-05 0.01266
## 397    3.80e-03 -0.052946 1.021 1.27e-04 0.00989
## 398    4.10e-03 -0.141619 1.003 9.11e-04 0.01223
## 399    1.34e-02 -0.111653 1.027 5.67e-04 0.02009
## 400    4.51e-03 -0.064451 1.020 1.89e-04 0.01042
## 401    1.85e-02 -0.076264 1.036 2.65e-04 0.02353
## 402    2.24e-04  0.002005 1.044 1.83e-07 0.02745
## 403   -4.33e-03 -0.056693 1.015 1.46e-04 0.00680
## 404    1.54e-03  0.018188 1.028 1.50e-05 0.01251
## 405   -1.61e-02 -0.044678 1.031 9.08e-05 0.01666
## 406   -1.39e-03  0.228428 0.944 2.36e-03 0.00952    *
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## 407   -3.42e-03 -0.050753 1.033 1.17e-04 0.01877
## 408   -1.37e-04 -0.034620 1.025 5.45e-05 0.01097
## 409    9.16e-03  0.071537 1.035 2.33e-04 0.02247
## 410    1.33e-02 -0.089028 1.029 3.60e-04 0.01935
## 411    1.00e-02 -0.072099 1.021 2.36e-04 0.01176
## 412    1.21e-02 -0.071506 1.042 2.33e-04 0.02800
## 413    6.69e-03  0.031341 1.027 4.47e-05 0.01241
## 414   -1.08e-03 -0.029143 1.035 3.86e-05 0.01960
## 415    1.49e-02  0.172869 0.988 1.36e-03 0.01147
## 416   -4.55e-02  0.284331 0.961 3.67e-03 0.01678
## 417    6.82e-03 -0.103304 1.024 4.85e-04 0.01720
## 418    1.08e-02  0.122565 1.023 6.83e-04 0.01925
## 419    2.88e-03 -0.077537 1.028 2.73e-04 0.01774
## 420    3.32e-04  0.007345 1.033 2.45e-06 0.01696
## 421   -6.57e-03 -0.019727 1.028 1.77e-05 0.01253
## 422   -2.33e-02  0.232069 0.946 2.44e-03 0.00998   *
## 423   -2.28e-02  0.224858 0.965 2.29e-03 0.01212
## 424   -3.56e-03 -0.023393 1.035 2.49e-05 0.01910
## 425    2.99e-03 -0.060941 1.042 1.69e-04 0.02797
## 426    3.28e-02 -0.093955 1.039 4.01e-04 0.02763
## 427   -7.02e-04 -0.027456 1.031 3.43e-05 0.01568
## 428   -5.25e-03 -0.076970 1.042 2.69e-04 0.02900
## 429    1.63e-03  0.009362 1.029 3.99e-06 0.01375
## 430    1.54e-03 -0.021870 1.035 2.18e-05 0.01942
## 431    1.29e-03 -0.130686 1.013 7.76e-04 0.01463
## 432    5.70e-03 -0.044774 1.028 9.12e-05 0.01405
## 433   -3.46e-03 -0.010321 1.030 4.85e-06 0.01400
## 434   -2.50e-03 -0.057468 1.021 1.50e-04 0.01021
## 435    4.04e-03  0.046656 1.032 9.90e-05 0.01814
## 436    8.55e-02  0.307928 0.951 4.30e-03 0.01714   *
## 437    1.63e-02  0.283276 0.945 3.64e-03 0.01401   *
## 438    3.09e-03 -0.049191 1.015 1.10e-04 0.00567
## 439    3.35e-02 -0.066634 1.026 2.02e-04 0.01499
## 440   -2.73e-02  0.253311 0.954 2.91e-03 0.01280   *
## 441   -1.94e-03  0.211479 0.987 2.03e-03 0.01529
## 442    1.21e-02 -0.054764 1.023 1.36e-04 0.01132
## 443   -1.18e-02 -0.068472 1.032 2.13e-04 0.01938
## 444    5.36e-03  0.229849 0.966 2.40e-03 0.01268
## 445    9.93e-04  0.007670 1.028 2.68e-06 0.01193
## 446   -1.93e-03 -0.048900 1.040 1.09e-04 0.02482
## 447    9.02e-03  0.026384 1.034 3.17e-05 0.01891
## 448   -3.30e-05 -0.000139 1.025 8.84e-10 0.00900
## 449   -7.62e-03 -0.017759 1.028 1.43e-05 0.01313
## 450   -1.16e-02 -0.034396 1.026 5.38e-05 0.01192
## 451   -1.19e-02 -0.078054 1.016 2.77e-04 0.01001
## 452   -1.25e-02 -0.111831 1.024 5.69e-04 0.01849
## 453    6.21e-03  0.030285 1.024 4.17e-05 0.01017
## 454   -1.01e-01  0.221806 0.994 2.23e-03 0.01837
## 455   -2.51e-05  0.000886 1.030 3.57e-08 0.01457
## 456    7.05e-03  0.033807 1.036 5.20e-05 0.02055
```

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## 457     2.82e-03 -0.012916 1.028 7.59e-06 0.01282
## 458    -1.25e-02  0.131218 1.006 7.82e-04 0.01225
## 459    -2.05e-03 -0.085675 1.036 3.34e-04 0.02418
## 460    -2.24e-02 -0.121604 1.020 6.72e-04 0.01720
## 461     8.52e-03 -0.089624 1.023 3.65e-04 0.01540
## 462     4.79e-03 -0.056565 1.019 1.46e-04 0.00906
## 463    -1.19e-03 -0.014363 1.027 9.38e-06 0.01169
## 464    -9.96e-03  0.142916 1.015 9.28e-04 0.01731
## 465     3.67e-03 -0.014781 1.027 9.94e-06 0.01121
## 466    -1.14e-04 -0.079161 1.031 2.85e-04 0.02016
## 467     3.99e-05 -0.000154 1.036 1.08e-09 0.01955
## 468    -4.62e-03 -0.030702 1.033 4.29e-05 0.01787
## 469    -1.18e-02 -0.045899 1.028 9.58e-05 0.01427
## 470    -3.40e-02  0.422519 0.866 8.06e-03 0.01525    *
## 471     7.78e-03 -0.074869 1.022 2.55e-04 0.01326
## 472     5.00e-04 -0.007743 1.028 2.73e-06 0.01272
## 473     6.54e-03 -0.035738 1.019 5.81e-05 0.00646
## 474     4.14e-03 -0.019414 1.052 1.71e-05 0.03465    *
## 475     8.99e-04 -0.093848 1.019 4.00e-04 0.01332
## 476    -5.91e-03 -0.070776 1.022 2.28e-04 0.01236
## 477     7.91e-03 -0.066941 1.019 2.04e-04 0.01021
## 478     3.35e-02 -0.104350 1.054 4.95e-04 0.04013    *
## 479    -7.40e-03 -0.031978 1.022 4.65e-05 0.00809
## 480    -2.95e-02  0.182087 0.986 1.51e-03 0.01210
## 481    -2.35e-02  0.213062 0.973 2.06e-03 0.01244
## 482     6.25e-03 -0.094310 1.013 4.04e-04 0.01038
## 483    -1.51e-02  0.290586 0.946 3.83e-03 0.01478    *
## 484     4.17e-03 -0.104120 1.013 4.93e-04 0.01147
## 485     4.72e-03  0.031171 1.032 4.42e-05 0.01732
## 486     1.92e-03 -0.063641 1.018 1.84e-04 0.00906
## 487     1.08e-02 -0.088237 1.020 3.54e-04 0.01348
## 488     8.80e-03 -0.084456 1.016 3.24e-04 0.01069
## 489    -3.64e-04  0.001195 1.025 6.49e-08 0.00990
## 490     1.11e-03 -0.093687 1.023 3.99e-04 0.01592
## 491     1.18e-02 -0.087723 1.013 3.50e-04 0.00965
## 492    -1.40e-02 -0.061936 1.022 1.74e-04 0.01124
## 493    -4.09e-04 -0.025199 1.034 2.89e-05 0.01862
## 494    -3.16e-03 -0.066998 1.021 2.04e-04 0.01172
## 495    -2.10e-02 -0.087533 1.020 3.48e-04 0.01302
## 496    -3.04e-02  0.278178 0.916 3.50e-03 0.01022    *
## 497     2.91e-03 -0.086650 1.015 3.41e-04 0.01045
## 498     3.44e-05  0.007123 1.037 2.31e-06 0.02139
## 499     1.09e-03 -0.053733 1.018 1.31e-04 0.00779
## 500     6.38e-05 -0.015481 1.024 1.09e-05 0.00902
## 501    -1.57e-02 -0.088451 1.015 3.56e-04 0.01044
## 502     7.41e-03 -0.058620 1.023 1.56e-04 0.01214
## 503    -6.78e-03 -0.028508 1.036 3.70e-05 0.02043
## 504    -2.01e-03 -0.014977 1.029 1.02e-05 0.01328
## 505    -3.63e-02  0.272893 0.974 3.38e-03 0.01854
## 506    -4.36e-04 -0.061668 1.013 1.73e-04 0.00667
```

```
## 507    8.57e-04   0.003198 1.024 4.65e-07 0.00860
## 508    3.69e-03  -0.036458 1.020 6.05e-05 0.00743
## 509    1.20e-02  -0.104071 1.022 4.92e-04 0.01655
## 510    9.29e-04  -0.009325 1.038 3.96e-06 0.02214
## 511    9.28e-03  -0.021261 1.030 2.06e-05 0.01460
## 512   -5.20e-03  -0.114701 1.009 5.98e-04 0.01114
## 513    1.79e-02  -0.087424 1.011 3.47e-04 0.00864
## 514   -2.37e-03   0.194192 0.982 1.71e-03 0.01237
## 515    6.89e-03   0.160797 1.014 1.17e-03 0.01874
## 516    3.32e-03  -0.030236 1.027 4.16e-05 0.01267
## 517    3.66e-03  -0.053421 1.025 1.30e-04 0.01250
## 518    2.96e-04  -0.003910 1.027 6.95e-07 0.01115
## 519   -3.29e-05  -0.019159 1.027 1.67e-05 0.01159
## 520   -1.38e-02  -0.063943 1.029 1.86e-04 0.01656
## 521   -8.88e-05  -0.003574 1.025 5.81e-07 0.00915
## 522    4.21e-04  -0.039821 1.031 7.21e-05 0.01689
## 523    1.51e-03  -0.016619 1.027 1.26e-05 0.01210
## 524    5.75e-03  -0.056789 1.039 1.47e-04 0.02450
## 525   -9.58e-03  -0.053251 1.028 1.29e-04 0.01473
## 526   -5.97e-02   0.202988 0.955 1.87e-03 0.00890
## 527   -3.36e-03  -0.070369 1.029 2.25e-04 0.01743
## 528   -1.32e-03  -0.005217 1.024 1.24e-06 0.00895
## 529    1.09e-02   0.219921 0.959 2.19e-03 0.01071
## 530   -5.60e-05  -0.000223 1.028 2.27e-09 0.01262
## 531   -7.17e-04  -0.006065 1.028 1.67e-06 0.01239
## 532   -4.92e-03  -0.019981 1.026 1.82e-05 0.01131
## 533   -5.40e-03  -0.029929 1.028 4.07e-05 0.01289
## 534   -1.51e-02  -0.088203 1.031 3.54e-04 0.02063
## 535    3.09e-03   0.065299 1.027 1.94e-04 0.01572
## 536    1.15e-02  -0.049678 1.036 1.12e-04 0.02169
## 537   -8.14e-04  -0.108589 1.024 5.36e-04 0.01827
## 538   -4.06e-03  -0.048045 1.034 1.05e-04 0.01980
## 539    4.36e-03   0.050892 1.032 1.18e-04 0.01798
## 540   -7.36e-04  -0.018515 1.027 1.56e-05 0.01207
## 541    3.40e-02   0.166675 1.004 1.26e-03 0.01556
## 542   -2.43e-04   0.006799 1.035 2.10e-06 0.01908
## 543    9.94e-03  -0.111679 1.016 5.67e-04 0.01393
## 544   -1.82e-02  -0.156118 1.020 1.11e-03 0.02109
## 545   -4.24e-02  -0.131792 1.040 7.90e-04 0.03162
## 546   -3.15e-03  -0.025868 1.034 3.04e-05 0.01861
## 547    7.93e-03  -0.065166 1.017 1.93e-04 0.00907
## 548    4.36e-03   0.250079 0.961 2.84e-03 0.01361
## 549   -2.61e-03  -0.040225 1.025 7.36e-05 0.01129
## 550   -2.78e-03  -0.061319 1.015 1.71e-04 0.00753
## 551    8.16e-03  -0.063348 1.020 1.82e-04 0.01037
## 552   -2.80e-03  -0.018741 1.028 1.60e-05 0.01293
## 553   -2.31e-02   0.053051 1.033 1.28e-04 0.01932
## 554   -9.75e-03  -0.116923 1.009 6.21e-04 0.01163
## 555   -1.86e-02  -0.088619 1.023 3.57e-04 0.01491
## 556   -8.51e-05  -0.021171 1.022 2.04e-05 0.00734
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## 557    1.24e-04 -0.004717 1.034 1.01e-06 0.01791
## 558   -2.15e-03  0.020559 1.037 1.92e-05 0.02137
## 559   -4.10e-03 -0.062111 1.022 1.75e-04 0.01171
## 560   -1.32e-03 -0.102646 1.017 4.79e-04 0.01339
## 561    6.99e-03 -0.064430 1.022 1.89e-04 0.01165
## 562    1.16e-02  0.062706 1.065 1.79e-04 0.04801    *
## 563    3.64e-02  0.251654 0.957 2.87e-03 0.01306
## 564    2.00e-03 -0.070152 1.024 2.24e-04 0.01405
## 565    3.92e-02 -0.100601 1.019 4.60e-04 0.01435
## 566    2.47e-03 -0.076205 1.017 2.64e-04 0.01033
## 567   -6.77e-03  0.227534 0.986 2.35e-03 0.01687
## 568    4.13e-05 -0.007133 1.025 2.31e-06 0.00984
## 569    6.62e-02  0.359082 0.918 5.83e-03 0.01637    *
## 570   -1.60e-02 -0.067641 1.034 2.08e-04 0.02143
## 571   -1.50e-03  0.040136 1.036 7.33e-05 0.02088
## 572    1.92e-02 -0.140685 1.016 9.00e-04 0.01758
## 573    3.21e-02 -0.065218 1.024 1.93e-04 0.01329
## 574   -2.82e-02  0.220278 0.959 2.20e-03 0.01073
## 575   -5.71e-04 -0.031512 1.024 4.52e-05 0.01036
## 576   -9.88e-03 -0.091969 1.025 3.85e-04 0.01715
## 577    7.92e-03 -0.039038 1.024 6.93e-05 0.01044
## 578    2.69e-03 -0.111347 1.009 5.64e-04 0.01083
## 579   -6.47e-02 -0.186365 1.008 1.58e-03 0.01949
## 580    1.07e-02 -0.098642 1.014 4.42e-04 0.01147
## 581    1.45e-03 -0.038251 1.020 6.65e-05 0.00747
## 582   -2.41e-03 -0.043948 1.026 8.78e-05 0.01279
## 583   -1.28e-04 -0.001112 1.032 5.63e-08 0.01608
## 584    9.31e-04 -0.027854 1.020 3.53e-05 0.00629
## 585    5.78e-03 -0.055127 1.039 1.38e-04 0.02502
## 586   -2.53e-02  0.234437 0.966 2.49e-03 0.01306
## 587    5.65e-03 -0.055904 1.026 1.42e-04 0.01366
## 588    3.39e-03  0.028957 1.028 3.81e-05 0.01360
## 589    3.76e-03  0.049537 1.028 1.12e-04 0.01454
## 590   -1.50e-02  0.167411 0.992 1.27e-03 0.01183
## 591   -3.20e-04  0.016988 1.025 1.31e-05 0.00982
## 592   -1.41e-02  0.189018 0.968 1.62e-03 0.00935
## 593    6.15e-02 -0.086215 1.061 3.38e-04 0.04513    *
## 594   -2.05e-04  0.001900 1.022 1.64e-07 0.00698
## 595    1.35e-03  0.017687 1.030 1.42e-05 0.01472
## 596   -2.08e-01  0.432599 0.955 8.48e-03 0.02992    *
## 597    3.99e-04 -0.018911 1.025 1.63e-05 0.00996
## 598    1.03e-03 -0.049396 1.020 1.11e-04 0.00898
## 599   -2.92e-02  0.204516 0.942 1.90e-03 0.00763    *
## 600   -3.86e-03 -0.025082 1.021 2.86e-05 0.00666
## 601    4.92e-04 -0.004767 1.027 1.03e-06 0.01136
## 602    1.62e-02 -0.133763 1.000 8.13e-04 0.01055
## 603    7.21e-03 -0.146814 1.006 9.79e-04 0.01403
## 604    7.85e-03 -0.095224 1.017 4.12e-04 0.01264
## 605   -1.07e-02 -0.058661 1.025 1.56e-04 0.01359
## 606    1.38e-02 -0.130560 1.010 7.75e-04 0.01357
```

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## 607   -2.98e-03 -0.098149 1.012 4.38e-04 0.01057
## 608    5.29e-02  0.441662 0.865 8.80e-03 0.01639      *
## 609   -9.35e-02  0.351270 0.920 5.58e-03 0.01602      *
## 610    7.88e-03 -0.043876 1.031 8.76e-05 0.01714
## 611   -1.49e-02 -0.056594 1.032 1.46e-04 0.01830
## 612   -7.40e-04 -0.004268 1.024 8.29e-07 0.00875
## 613    6.84e-03 -0.106639 1.012 5.17e-04 0.01132
## 614    3.80e-04 -0.017964 1.026 1.47e-05 0.01079
## 615    4.64e-02  0.219530 0.968 2.19e-03 0.01203
## 616    4.96e-04 -0.005852 1.031 1.56e-06 0.01531
## 617    1.54e-02  0.024144 1.043 2.65e-05 0.02642
## 618    2.89e-06 -0.042281 1.019 8.13e-05 0.00749
## 619    3.14e-02 -0.122705 1.013 6.84e-04 0.01405
## 620    8.48e-04  0.006505 1.033 1.92e-06 0.01753
## 621    4.84e-02 -0.156648 1.007 1.11e-03 0.01552
## 622   -1.84e-03 -0.037856 1.028 6.52e-05 0.01418
## 623    2.32e-04 -0.027072 1.025 3.33e-05 0.01086
## 624    1.98e-03 -0.065711 1.024 1.96e-04 0.01298
## 625   -1.15e-02 -0.094583 1.036 4.07e-04 0.02482
## 626    6.84e-03 -0.051966 1.021 1.23e-04 0.00987
## 627    2.02e-04 -0.002878 1.023 3.77e-07 0.00760
## 628    6.05e-03 -0.014333 1.042 9.34e-06 0.02545
## 629    2.54e-03 -0.027325 1.024 3.40e-05 0.00932
## 630   -7.69e-03 -0.035279 1.025 5.66e-05 0.01143
## 631    2.41e-04 -0.042820 1.033 8.34e-05 0.01846
## 632    2.24e-03 -0.081077 1.023 2.99e-04 0.01460
## 633   -8.86e-03 -0.156449 1.001 1.11e-03 0.01333
## 634    4.19e-03 -0.071820 1.018 2.35e-04 0.01010
## 635    4.86e-03 -0.118291 1.014 6.36e-04 0.01372
## 636   -1.28e-02 -0.025953 1.032 3.06e-05 0.01647
## 637    6.67e-02  0.259313 0.995 3.05e-03 0.02307
## 638    1.00e-03  0.030791 1.030 4.31e-05 0.01517
## 639   -5.52e-04 -0.056239 1.023 1.44e-04 0.01136
## 640    8.76e-04 -0.022431 1.029 2.29e-05 0.01338
## 641   -5.97e-03 -0.061877 1.029 1.74e-04 0.01644
## 642    2.92e-02 -0.070236 1.018 2.24e-04 0.01022
## 643   -1.94e-03 -0.058112 1.017 1.54e-04 0.00815
## 644    6.93e-04 -0.031113 1.027 4.40e-05 0.01213
## 645    1.05e-02 -0.052463 1.020 1.25e-04 0.00912
## 646    2.22e-04  0.204088 0.966 1.89e-03 0.01046
## 647    6.17e-04  0.009730 1.033 4.31e-06 0.01733
## 648   -9.53e-04 -0.015781 1.025 1.13e-05 0.00947
## 649    1.76e-02 -0.047089 1.025 1.01e-04 0.01193
## 650    2.97e-03  0.035615 1.033 5.77e-05 0.01831
## 651    2.16e-03 -0.021494 1.027 2.10e-05 0.01202
## 652   -1.35e-02 -0.061571 1.030 1.72e-04 0.01738
## 653   -6.90e-02 -0.194406 1.026 1.72e-03 0.02905
## 654    1.98e-02 -0.066608 1.063 2.02e-04 0.04622      *
## 655    2.04e-03  0.019089 1.025 1.66e-05 0.00968
## 656   -2.68e-03 -0.058409 1.022 1.55e-04 0.01090
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## 657   -1.59e-03   0.190197 1.009 1.64e-03 0.02001
## 658   -1.42e-03  -0.038605 1.022 6.78e-05 0.00939
## 659    6.96e-02  -0.157333 1.004 1.12e-03 0.01429
## 660    4.92e-03  -0.059679 1.019 1.62e-04 0.00953
## 661   -7.95e-03   0.343248 0.967 5.34e-03 0.02399
## 662    4.99e-03  -0.050121 1.030 1.14e-04 0.01632
## 663   -2.82e-03   0.185289 0.957 1.56e-03 0.00771
## 664   -3.30e-02   0.257054 0.942 2.99e-03 0.01147    *
## 665   -1.53e-02  -0.044335 1.024 8.94e-05 0.01113
## 666   -4.57e-03  -0.124138 1.017 7.00e-04 0.01584
## 667   -7.33e-03   0.257783 0.957 3.01e-03 0.01369
## 668   -1.09e-01   0.277069 0.973 3.48e-03 0.01869
## 669    1.37e-04  -0.017709 1.021 1.43e-05 0.00652
## 670   -2.40e-03   0.235730 0.968 2.52e-03 0.01358
## 671    1.41e-02  -0.059320 1.012 1.60e-04 0.00587
## 672    7.71e-03  -0.049979 1.018 1.14e-04 0.00758
## 673    1.69e-03  -0.042016 1.016 8.03e-05 0.00559
## 674    1.15e-04  -0.161728 0.993 1.19e-03 0.01165
## 675   -1.41e-02  -0.071260 1.027 2.31e-04 0.01594
## 676    2.12e-02  -0.067810 1.025 2.09e-04 0.01453
## 677   -7.47e-03  -0.069336 1.031 2.19e-04 0.01928
## 678    1.09e-02  -0.029764 1.045 4.03e-05 0.02897
## 679    1.42e-03  -0.018474 1.027 1.55e-05 0.01203
## 680   -2.07e-03   0.004157 1.037 7.86e-07 0.02088
## 681    1.49e-02  -0.058723 1.020 1.57e-04 0.00984
## 682    9.86e-03   0.041072 1.029 7.67e-05 0.01511
## 683   -1.01e-03  -0.029896 1.028 4.07e-05 0.01309
## 684   -1.53e-02   0.158417 0.987 1.14e-03 0.00986
## 685    7.03e-03  -0.072801 1.019 2.41e-04 0.01094
## 686   -1.89e-02  -0.106667 1.019 5.17e-04 0.01477
## 687   -4.81e-02  -0.100198 1.041 4.57e-04 0.02935
## 688   -3.38e-03  -0.013919 1.027 8.81e-06 0.01116
## 689   -1.41e-02   0.158979 1.003 1.15e-03 0.01424
## 690   -3.15e-02   0.196111 0.980 1.75e-03 0.01204
## 691    7.60e-03  -0.109893 1.019 5.49e-04 0.01540
## 692    1.10e-02  -0.129104 1.015 7.58e-04 0.01577
## 693    9.92e-03  -0.036133 1.024 5.94e-05 0.01077
## 694   -8.96e-03   0.240990 0.934 2.63e-03 0.00938    *
## 695   -1.56e-02  -0.059989 1.019 1.64e-04 0.00920
## 696    3.79e-02   0.330923 0.968 4.97e-03 0.02289
## 697    7.74e-03   0.036694 1.030 6.12e-05 0.01543
## 698   -8.08e-04  -0.050826 1.022 1.17e-04 0.01051
## 699    1.02e-02  -0.025751 1.022 3.02e-05 0.00783
## 700    1.99e-02   0.075219 1.024 2.57e-04 0.01460
## 701   -3.19e-02   0.405901 0.917 7.45e-03 0.02003    *
## 702   -1.79e-02   0.034580 1.048 5.44e-05 0.03197    *
## 703   -1.42e-03  -0.006303 1.032 1.81e-06 0.01593
## 704    2.97e-04  -0.097268 1.021 4.30e-04 0.01517
## 705    1.37e-02   0.083620 1.021 3.18e-04 0.01356
## 706   -7.32e-04  -0.005313 1.030 1.28e-06 0.01464
```

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## 707   -3.26e-02   0.367289 0.975 6.12e-03 0.02860
## 708    9.76e-03  -0.044431 1.037 8.98e-05 0.02256
## 709    9.06e-03   0.048725 1.029 1.08e-04 0.01585
## 710   -7.47e-03   0.203435 0.995 1.88e-03 0.01671
## 711    2.07e-02  -0.050725 1.045 1.17e-04 0.02989
## 712   -1.04e-02   0.153399 0.994 1.07e-03 0.01103
## 713    1.73e-03  -0.050435 1.016 1.16e-04 0.00652
## 714   -3.92e-03   0.035888 1.024 5.86e-05 0.01060
## 715    4.15e-04   0.107169 1.030 5.22e-04 0.02197
## 716    2.21e-02  -0.093996 1.017 4.02e-04 0.01217
## 717    2.65e-03   0.081247 1.042 3.00e-04 0.02877
## 718    2.01e-04  -0.045027 1.018 9.22e-05 0.00683
## 719   -1.07e-02  -0.069477 1.036 2.20e-04 0.02286
## 720   -2.50e-02  -0.073656 1.028 2.47e-04 0.01727
## 721   -3.84e-02   0.190845 0.986 1.65e-03 0.01293
## 722    3.20e-03  -0.014903 1.031 1.01e-05 0.01533
## 723   -2.61e-03  -0.049103 1.021 1.10e-04 0.00932
## 724    1.44e-02   0.054896 1.021 1.37e-04 0.00987
## 725    2.90e-03  -0.044165 1.024 8.87e-05 0.01137
## 726   -8.42e-03   0.237270 0.985 2.56e-03 0.01763
## 727    5.96e-04  -0.059663 1.023 1.62e-04 0.01220
## 728    8.91e-03  -0.076432 1.024 2.66e-04 0.01464
## 729    1.32e-02   0.045036 1.023 9.22e-05 0.01068
## 730    1.07e-01  -0.174987 1.020 1.39e-03 0.02340
## 731   -1.66e-02  -0.101553 1.022 4.69e-04 0.01611
## 732   -1.47e-02   0.149491 1.001 1.02e-03 0.01240
## 733   -1.40e-02   0.178047 0.970 1.44e-03 0.00873
## 734   -1.16e-02   0.043324 1.026 8.54e-05 0.01240
## 735    2.97e-02  -0.149622 1.006 1.02e-03 0.01424
## 736    9.94e-04  -0.095844 1.021 4.18e-04 0.01478
## 737    2.29e-04  -0.004417 1.027 8.88e-07 0.01129
## 738    4.81e-03  -0.032573 1.020 4.83e-05 0.00692
## 739   -2.56e-04   0.002613 1.033 3.11e-07 0.01686
## 740    1.62e-03  -0.030712 1.024 4.29e-05 0.00976
## 741    3.93e-04  -0.026378 1.025 3.16e-05 0.01008
## 742   -1.89e-03   0.048665 1.033 1.08e-04 0.01890
## 743    2.73e-03  -0.026230 1.024 3.13e-05 0.00992
## 744   -3.29e-03  -0.088389 1.024 3.55e-04 0.01595
## 745   -2.69e-02   0.258796 0.974 3.04e-03 0.01709
## 746   -2.24e-02  -0.123563 1.015 6.94e-04 0.01509
## 747   -6.02e-03   0.060536 1.046 1.67e-04 0.03071  *
## 748    1.06e-02  -0.121562 1.012 6.72e-04 0.01337
## 749   -3.94e-03   0.246147 0.995 2.75e-03 0.02135
## 750   -2.01e-01   0.528485 0.902 1.26e-02 0.02798  *
## 751   -2.02e-03  -0.007687 1.040 2.69e-06 0.02364
## 752    4.64e-02   0.134059 1.032 8.17e-04 0.02580
## 753    9.73e-02   0.431103 0.949 8.42e-03 0.02847  *
## 754    1.68e-02  -0.190406 1.010 1.65e-03 0.02052
## 755    7.89e-05  -0.075696 1.023 2.61e-04 0.01341
## 756   -1.52e-02   0.063913 1.029 1.86e-04 0.01692
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## 757   -7.69e-03  -0.060142 1.034 1.65e-04 0.02072
## 758    9.25e-03   0.035658 1.040 5.78e-05 0.02493
## 759   -4.45e-03  -0.050115 1.032 1.14e-04 0.01787
## 760   -3.88e-03  -0.087158 1.018 3.45e-04 0.01200
## 761   -1.05e-02  -0.030943 1.038 4.36e-05 0.02244
## 762   -3.74e-02   0.240504 0.931 2.62e-03 0.00909   *
## 763   -8.70e-03   0.161880 1.000 1.19e-03 0.01362
## 764    1.07e-02  -0.077283 1.012 2.72e-04 0.00803
## 765    5.10e-03  -0.032181 1.023 4.71e-05 0.00894
## 766   -3.70e-04  -0.037249 1.021 6.31e-05 0.00847
## 767   -2.55e-02  -0.076327 1.033 2.65e-04 0.02096
## 768    1.54e-02  -0.058914 1.022 1.58e-04 0.01129
## 769   -1.38e-04  -0.080974 1.023 2.98e-04 0.01444
## 770    2.11e-03  -0.087054 1.016 3.45e-04 0.01107
## 771    5.14e-03   0.082048 1.029 3.06e-04 0.01865
## 772    1.40e-02  -0.034206 1.030 5.32e-05 0.01534
## 773    1.70e-03  -0.041779 1.030 7.94e-05 0.01624
## 774   -2.33e-03  -0.040480 1.023 7.45e-05 0.00993
## 775    1.02e-02  -0.040705 1.041 7.54e-05 0.02603
## 776    1.31e-03  -0.025446 1.029 2.95e-05 0.01358
## 777    2.53e-03   0.176905 0.982 1.42e-03 0.01063
## 778   -2.82e-02   0.187166 0.984 1.59e-03 0.01209
## 779    1.30e-02  -0.062383 1.036 1.77e-04 0.02222
## 780    9.73e-02   0.374580 0.958 6.36e-03 0.02489   *
## 781    8.04e-02   0.347108 0.955 5.46e-03 0.02155
## 782    2.51e-03  -0.095782 1.013 4.17e-04 0.01060
## 783    6.53e-03  -0.068742 1.023 2.15e-04 0.01320
## 784    4.65e-03   0.017629 1.026 1.41e-05 0.01090
## 785    4.43e-04  -0.009028 1.028 3.71e-06 0.01203
## 786    2.98e-02  -0.059627 1.036 1.62e-04 0.02211
## 787   -1.42e-03  -0.091805 1.027 3.83e-04 0.01844
## 788    1.76e-06   0.004180 1.028 7.95e-07 0.01282
## 789   -3.67e-03  -0.020665 1.024 1.94e-05 0.00908
## 790   -9.11e-02   0.347347 0.918 5.46e-03 0.01551   *
## 791   -7.21e-05   0.005399 1.029 1.33e-06 0.01317
## 792    4.71e-02   0.274350 0.958 3.41e-03 0.01530
## 793    1.74e-02   0.241155 0.978 2.64e-03 0.01620
## 794    6.92e-03  -0.062789 1.017 1.79e-04 0.00852
## 795   -8.82e-03  -0.093557 1.016 3.98e-04 0.01193
## 796    3.20e-03  -0.077579 1.018 2.74e-04 0.01115
## 797    4.26e-02   0.318116 0.929 4.58e-03 0.01467   *
## 798   -4.28e-02   0.271523 0.948 3.34e-03 0.01339   *
## 799    1.72e-03   0.125203 1.009 7.12e-04 0.01244
## 800    7.22e-03  -0.039924 1.039 7.25e-05 0.02376
## 801   -2.37e-02   0.226913 0.968 2.34e-03 0.01276
## 802   -9.36e-03   0.252736 0.972 2.90e-03 0.01603
## 803    1.94e-03  -0.042421 1.025 8.18e-05 0.01135
## 804    8.31e-04  -0.014791 1.028 9.95e-06 0.01286
## 805   -5.10e-03   0.028844 1.045 3.78e-05 0.02879
## 806    9.92e-03   0.027012 1.030 3.32e-05 0.01457
```

```
## 807    2.92e-02 -0.052229 1.024 1.24e-04 0.01172
## 808   -1.49e-02 -0.057696 1.021 1.51e-04 0.01053
## 809    6.79e-04  0.002839 1.032 3.67e-07 0.01629
## 810    2.82e-03  0.025042 1.029 2.85e-05 0.01379
## 811    5.36e-03  0.020972 1.028 2.00e-05 0.01261
## 812    7.16e-03 -0.052748 1.026 1.27e-04 0.01375
## 813    2.73e-02 -0.070241 1.028 2.24e-04 0.01690
## 814   -1.21e-01  0.404647 0.936 7.41e-03 0.02316    *
## 815   -1.14e-03 -0.020615 1.034 1.93e-05 0.01817
## 816   -4.57e-03 -0.152076 0.998 1.05e-03 0.01179
## 817    3.05e-03 -0.040902 1.025 7.61e-05 0.01168
## 818   -1.68e-03 -0.009979 1.037 4.53e-06 0.02114
## 819    4.64e-05 -0.042441 1.024 8.19e-05 0.01120
## 820   -7.04e-03 -0.089248 1.019 3.62e-04 0.01274
## 821    9.09e-04 -0.011536 1.027 6.05e-06 0.01184
## 822   -2.78e-03  0.009235 1.027 3.88e-06 0.01157
## 823    3.49e-03 -0.070959 1.023 2.29e-04 0.01308
## 824    2.61e-02 -0.068145 1.023 2.11e-04 0.01317
## 825    1.29e-02 -0.150898 1.016 1.03e-03 0.01883
## 826    4.62e-02 -0.107431 1.011 5.25e-04 0.01136
## 827    2.03e-03 -0.004272 1.031 8.30e-07 0.01529
## 828   -6.22e-03 -0.136755 1.001 8.50e-04 0.01097
## 829   -3.16e-02  0.285714 0.945 3.70e-03 0.01416    *
## 830    5.84e-03  0.156867 0.993 1.12e-03 0.01110
## 831    5.37e-03 -0.112118 1.013 5.71e-04 0.01282
## 832    6.20e-05  0.209932 0.944 2.00e-03 0.00822    *
## 833   -3.84e-04 -0.034439 1.024 5.39e-05 0.01041
## 834    2.68e-03 -0.040458 1.019 7.44e-05 0.00733
## 835    2.90e-03 -0.017583 1.022 1.41e-05 0.00695
## 836   -3.32e-03 -0.068485 1.022 2.13e-04 0.01195
## 837    9.50e-02  0.365836 0.939 6.06e-03 0.02027    *
## 838   -2.45e-02 -0.058360 1.032 1.55e-04 0.01857
## 839    7.12e-02  0.234871 1.000 2.50e-03 0.02197
## 840   -7.17e-03 -0.054848 1.021 1.37e-04 0.00986
## 841   -6.53e-03 -0.015138 1.028 1.04e-05 0.01221
## 842    1.12e-02 -0.091756 1.018 3.83e-04 0.01235
## 843   -2.60e-02  0.210453 0.958 2.01e-03 0.00984
## 844    4.30e-03  0.027215 1.031 3.37e-05 0.01583
## 845    2.22e-03 -0.024717 1.019 2.78e-05 0.00566
## 846    2.11e-02 -0.203157 1.006 1.87e-03 0.02045
## 847    1.22e-03 -0.013387 1.027 8.15e-06 0.01152
## 848   -1.03e-02 -0.085053 1.023 3.29e-04 0.01495
## 849   -2.23e-03 -0.043180 1.026 8.48e-05 0.01232
## 850    1.13e-02  0.246986 0.968 2.77e-03 0.01462
## 851    3.62e-03 -0.031279 1.029 4.45e-05 0.01419
## 852   -1.14e-03  0.033930 1.032 5.24e-05 0.01741
## 853    3.01e-03  0.013717 1.026 8.56e-06 0.01037
## 854    2.19e-02 -0.115757 1.013 6.09e-04 0.01298
## 855   -2.18e-03 -0.105452 1.014 5.05e-04 0.01239
## 856    1.14e-02  0.025577 1.025 2.98e-05 0.01033
```

```
## 857     3.10e-04 -0.118338 1.004 6.36e-04 0.00981
## 858    -3.52e-02  0.216555 0.965 2.13e-03 0.01127
## 859     2.34e-02  0.093514 1.022 3.98e-04 0.01492
## 860     1.37e-03 -0.143873 0.999 9.40e-04 0.01135
## 861    -4.92e-03  0.199217 0.983 1.80e-03 0.01314
## 862    -1.45e-03  0.004346 1.042 8.59e-07 0.02520
## 863     3.99e-03 -0.105673 1.026 5.08e-04 0.01906
## 864    -1.85e-03 -0.022616 1.023 2.33e-05 0.00833
## 865    -3.62e-02  0.337209 0.957 5.15e-03 0.02097
## 866     9.96e-04 -0.050807 1.026 1.17e-04 0.01357
## 867     5.62e-03 -0.063502 1.021 1.83e-04 0.01104
## 868    -9.25e-05 -0.002952 1.047 3.96e-07 0.03009   *
## 869     8.29e-03 -0.067120 1.018 2.05e-04 0.00973
## 870     3.56e-03  0.036241 1.030 5.97e-05 0.01567
## 871    -2.14e-02 -0.083406 1.021 3.16e-04 0.01303
## 872    -3.69e-02  0.268560 0.943 3.27e-03 0.01256   *
## 873     4.42e-02 -0.089845 1.025 3.67e-04 0.01629
## 874    -6.62e-03 -0.024349 1.027 2.70e-05 0.01184
## 875    -4.31e-03 -0.015817 1.028 1.14e-05 0.01247
## 876    -1.20e-02 -0.029722 1.050 4.02e-05 0.03371   *
## 877    -1.88e-05 -0.067731 1.021 2.09e-04 0.01168
## 878     2.65e-03  0.029359 1.026 3.92e-05 0.01166
## 879    -2.36e-04  0.055450 1.032 1.40e-04 0.01852
## 880     2.97e-03  0.011719 1.037 6.25e-06 0.02077
## 881    -1.14e-03 -0.100567 1.012 4.60e-04 0.01095
## 882    -1.84e-02 -0.100193 1.017 4.56e-04 0.01304
## 883    -2.98e-02 -0.151034 1.019 1.04e-03 0.02005
## 884    -2.44e-03 -0.014056 1.029 8.99e-06 0.01364
## 885    -4.66e-03 -0.051304 1.024 1.20e-04 0.01215
## 886     1.10e-02 -0.041141 1.020 7.70e-05 0.00783
## 887    -1.11e-03 -0.065147 1.025 1.93e-04 0.01364
## 888     1.27e-02 -0.233020 0.997 2.47e-03 0.02072
## 889    -3.76e-02 -0.070321 1.039 2.25e-04 0.02521
## 890    -3.48e-02 -0.173611 0.998 1.37e-03 0.01433
## 891     9.13e-04  0.030675 1.042 4.28e-05 0.02624
## 892     8.74e-05  0.000595 1.029 1.61e-08 0.01336
## 893    -2.54e-02  0.222496 1.010 2.25e-03 0.02425
## 894     1.71e-04 -0.024178 1.025 2.66e-05 0.01071
## 895     4.06e-02  0.160495 1.023 1.17e-03 0.02345
## 896     3.78e-02 -0.112877 1.009 5.79e-04 0.01101
## 897    -1.30e-02 -0.083168 1.021 3.15e-04 0.01349
## 898    -5.82e-03 -0.024694 1.031 2.77e-05 0.01555
## 899     1.25e-02  0.052520 1.034 1.25e-04 0.01988
## 900     1.19e-04 -0.007358 1.034 2.46e-06 0.01818
## 901     1.09e-03 -0.038568 1.030 6.77e-05 0.01547
## 902     4.99e-03 -0.038385 1.027 6.70e-05 0.01273
## 903     8.93e-04 -0.031770 1.023 4.59e-05 0.00877
## 904     1.91e-02 -0.080816 1.020 2.97e-04 0.01221
## 905    -2.64e-04  0.012522 1.035 7.13e-06 0.01953
## 906     1.20e-02  0.051762 1.035 1.22e-04 0.02115
```

```
## 907    3.94e-03 -0.027717 1.024 3.49e-05 0.00972
## 908   -1.60e-04  0.034494 1.027 5.41e-05 0.01304
## 909    2.69e-04  0.001246 1.030 7.06e-08 0.01443
## 910    2.20e-03 -0.183083 0.999 1.52e-03 0.01564
## 911    7.62e-04 -0.022932 1.026 2.39e-05 0.01079
## 912   -8.24e-03  0.117885 1.018 6.32e-04 0.01556
## 913    4.10e-02 -0.124273 1.005 7.02e-04 0.01106
## 914    1.49e-02  0.360936 0.975 5.91e-03 0.02787
## 915    1.62e-01 -0.245768 1.073 2.75e-03 0.06570    *
## 916   -6.01e-03  0.179415 1.003 1.46e-03 0.01670
## 917    1.08e-02  0.035873 1.031 5.85e-05 0.01643
## 918    5.66e-03 -0.145330 1.000 9.60e-04 0.01180
## 919    2.06e-02 -0.110787 1.040 5.58e-04 0.02986
## 920   -1.95e-04  0.001383 1.031 8.70e-08 0.01505
## 921   -1.18e-02 -0.040789 1.031 7.57e-05 0.01636
## 922    1.11e-02 -0.151254 0.996 1.04e-03 0.01130
## 923    3.62e-03  0.031028 1.041 4.38e-05 0.02499
## 924   -6.13e-03 -0.040129 1.027 7.32e-05 0.01319
## 925   -9.15e-04 -0.065836 1.009 1.97e-04 0.00563
## 926    1.48e-02 -0.104806 1.025 4.99e-04 0.01813
## 927   -1.09e-02 -0.020724 1.047 1.95e-05 0.03077    *
## 928   -1.69e-02 -0.092826 1.022 3.92e-04 0.01527
## 929   -2.94e-02  0.340043 0.890 5.23e-03 0.01205    *
## 930   -8.81e-03 -0.140051 1.008 8.91e-04 0.01394
## 931   -6.01e-02 -0.179438 1.016 1.46e-03 0.02206
## 932   -2.14e-02 -0.086115 1.021 3.37e-04 0.01337
## 933    5.26e-02  0.255333 0.959 2.96e-03 0.01376
## 934    6.36e-03 -0.076058 1.015 2.63e-04 0.00909
## 935    1.36e-02 -0.079722 1.015 2.89e-04 0.00981
## 936    1.37e-02  0.054279 1.021 1.34e-04 0.01019
## 937    5.93e-03 -0.131602 1.030 7.87e-04 0.02440
## 938    1.08e-01 -0.225016 1.022 2.30e-03 0.03037
## 939   -1.92e-03 -0.058920 1.038 1.58e-04 0.02354
## 940   -1.54e-01  0.290998 0.891 3.83e-03 0.00909    *
## 941    2.85e-03  0.231362 0.958 2.43e-03 0.01147
## 942   -1.83e-02 -0.061579 1.024 1.72e-04 0.01310
## 943    6.27e-03  0.027709 1.025 3.49e-05 0.01060
## 944   -8.82e-03 -0.038772 1.029 6.84e-05 0.01518
## 945    1.14e-03 -0.021785 1.035 2.16e-05 0.01974
## 946   -4.33e-03 -0.102718 1.029 4.80e-04 0.02059
## 947   -6.15e-02  0.197760 0.990 1.78e-03 0.01458
## 948    4.08e-02  0.270241 0.973 3.31e-03 0.01803
## 949   -5.42e-02 -0.141859 1.021 9.15e-04 0.02034
## 950   -1.06e-02 -0.063575 1.022 1.84e-04 0.01154
## 951    1.62e-03 -0.056364 1.034 1.44e-04 0.02033
## 952   -1.84e-02 -0.179898 1.029 1.47e-03 0.02938
## 953   -2.64e-03  0.191146 0.986 1.66e-03 0.01286
## 954   -8.80e-03  0.278494 0.928 3.51e-03 0.01141    *
## 955   -1.44e-03 -0.015162 1.041 1.05e-05 0.02445
## 956    5.49e-03  0.024657 1.034 2.77e-05 0.01831
```

```
## 957   -1.85e-04 -0.000697 1.040 2.21e-08 0.02420
## 958    1.39e-03 -0.005405 1.030 1.33e-06 0.01382
## 959    2.21e-03  0.041724 1.025 7.92e-05 0.01168
## 960   -4.35e-03 -0.021439 1.028 2.09e-05 0.01284
## 961   -7.26e-03 -0.030208 1.028 4.15e-05 0.01317
## 962    7.11e-02 -0.157535 1.003 1.13e-03 0.01407
## 963    4.70e-03 -0.021108 1.054 2.03e-05 0.03667   *
## 964   -1.48e-03 -0.006333 1.026 1.82e-06 0.01070
## 965    5.20e-03 -0.087540 1.018 3.48e-04 0.01196
## 966    6.79e-04 -0.029142 1.024 3.86e-05 0.01007
## 967    7.60e-02  0.324373 0.948 4.77e-03 0.01815   *
## 968   -1.02e-03 -0.025948 1.023 3.06e-05 0.00887
## 969   -2.86e-02 -0.069202 1.030 2.18e-04 0.01817
## 970    7.61e-03  0.045999 1.028 9.62e-05 0.01485
## 971    5.33e-04 -0.003984 1.026 7.22e-07 0.01009
## 972   -8.13e-04 -0.034137 1.031 5.30e-05 0.01628
## 973    1.69e-03 -0.022540 1.034 2.31e-05 0.01881
## 974   -2.53e-03  0.004283 1.028 8.35e-07 0.01204
## 975    3.48e-02 -0.119675 1.018 6.51e-04 0.01609
## 976   -2.32e-02  0.310532 0.954 4.37e-03 0.01787   *
## 977    1.27e-02 -0.071000 1.040 2.29e-04 0.02648
## 978    2.25e-02 -0.073138 1.031 2.43e-04 0.01891
## 979   -3.81e-04  0.031516 1.033 4.52e-05 0.01768
## 980   -8.71e-03 -0.051884 1.024 1.22e-04 0.01156
## 981   -1.92e-02  0.239775 0.955 2.61e-03 0.01183
## 982   -1.34e-02  0.200021 0.974 1.82e-03 0.01136
## 983   -2.21e-04 -0.005122 1.028 1.19e-06 0.01247
## 984    4.44e-03  0.016147 1.030 1.19e-05 0.01410
## 985   -7.48e-03 -0.082516 1.018 3.10e-04 0.01128
## 986    6.40e-02  0.248101 0.966 2.79e-03 0.01425
## 987   -1.44e-02 -0.119593 1.018 6.50e-04 0.01568
## 988    1.93e-03 -0.049290 1.024 1.10e-04 0.01136
## 989    7.69e-05 -0.102697 1.017 4.79e-04 0.01314
## 990    3.99e-03 -0.056086 1.016 1.43e-04 0.00716
## 991    2.43e-03 -0.030075 1.029 4.11e-05 0.01459
## 992    4.64e-03 -0.104080 1.010 4.92e-04 0.01049
## 993    4.92e-03  0.035007 1.030 5.57e-05 0.01572
## 994    2.62e-03 -0.050266 1.025 1.15e-04 0.01230
## 995    7.99e-03 -0.094062 1.031 4.02e-04 0.02117
## 996    2.23e-02 -0.202956 1.010 1.87e-03 0.02207
## 997   -1.36e-02 -0.107141 1.016 5.22e-04 0.01320
## 998    6.03e-02  0.203192 0.988 1.87e-03 0.01468
## 999    1.99e-02 -0.099394 1.012 4.49e-04 0.01060
## 1000   6.34e-04  0.020295 1.034 1.87e-05 0.01823
## 1001 -1.59e-03 -0.047363 1.029 1.02e-04 0.01520
## 1002  1.74e-03 -0.067221 1.018 2.05e-04 0.00957
## 1003 -9.23e-04 -0.082914 1.019 3.13e-04 0.01235
## 1004  1.55e-03 -0.041793 1.023 7.94e-05 0.00996
## 1005 -7.53e-03 -0.043945 1.026 8.78e-05 0.01308
## 1006 -2.24e-02 -0.107770 1.020 5.28e-04 0.01589
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## 1007 -3.36e-03  0.274226 0.991 3.41e-03 0.02341
## 1008  3.39e-02  0.235355 0.984 2.51e-03 0.01712
## 1009  2.74e-04 -0.001727 1.036 1.36e-07 0.02002
## 1010 -1.06e-04  0.004423 1.034 8.90e-07 0.01849
## 1011 -4.82e-02  0.128707 1.028 7.53e-04 0.02261
## 1012  3.30e-02 -0.149103 1.005 1.01e-03 0.01367
## 1013 -1.75e-02  0.183561 0.988 1.53e-03 0.01258
## 1014  1.06e-03 -0.016986 1.023 1.31e-05 0.00812
## 1015  1.67e-02 -0.108964 1.027 5.40e-04 0.02015
## 1016  1.91e-04 -0.046662 1.026 9.90e-05 0.01271
## 1017 -2.43e-02  0.203866 0.979 1.89e-03 0.01269
## 1018 -1.07e-02 -0.061914 1.023 1.74e-04 0.01205
## 1019 -2.43e-02 -0.074833 1.020 2.55e-04 0.01176
## 1020  2.68e-03 -0.069884 1.017 2.22e-04 0.00935
## 1021  4.55e-03 -0.020730 1.029 1.95e-05 0.01342
## 1022 -5.21e-03  0.201418 0.969 1.84e-03 0.01055
## 1023  2.60e-03 -0.020476 1.035 1.91e-05 0.01970
## 1024  8.79e-03 -0.050961 1.037 1.18e-04 0.02237
## 1025 -2.64e-02  0.061629 1.039 1.73e-04 0.02523
## 1026  2.71e-03 -0.062898 1.022 1.80e-04 0.01163
## 1027  5.74e-04  0.007962 1.027 2.88e-06 0.01154
## 1028  6.25e-03 -0.035217 1.022 5.64e-05 0.00896
## 1029 -3.66e-03 -0.068235 1.019 2.12e-04 0.01032
## 1030  1.08e-02  0.070018 1.027 2.23e-04 0.01597
## 1031 -4.33e-03 -0.021679 1.031 2.14e-05 0.01542
## 1032 -7.60e-02  0.458680 0.887 9.50e-03 0.02013   *
## 1033 -1.85e-02  0.242951 1.003 2.68e-03 0.02382
## 1034  9.05e-03  0.374762 0.924 6.36e-03 0.01844   *
## 1035 -3.03e-02 -0.137950 1.022 8.65e-04 0.02054
## 1036  2.19e-03 -0.029361 1.025 3.92e-05 0.01080
## 1037  3.08e-03  0.225485 0.985 2.31e-03 0.01620
## 1038 -5.58e-03 -0.089007 1.026 3.60e-04 0.01704
## 1039 -6.44e-05 -0.014565 1.026 9.65e-06 0.01096
## 1040  3.27e-03  0.203435 0.928 1.87e-03 0.00645   *
## 1041  7.73e-03  0.034994 1.036 5.57e-05 0.02070
## 1042  2.64e-03 -0.052825 1.021 1.27e-04 0.00960
## 1043 -1.47e-03 -0.041787 1.028 7.94e-05 0.01394
## 1044  3.32e-03  0.022801 1.041 2.36e-05 0.02525
## 1045  4.56e-04 -0.019481 1.027 1.73e-05 0.01153
## 1046  7.55e-05  0.003113 1.024 4.41e-07 0.00856
## 1047 -1.38e-03 -0.073746 1.023 2.47e-04 0.01318
## 1048  6.55e-04 -0.052907 1.022 1.27e-04 0.01079
## 1049 -2.53e-02 -0.063106 1.031 1.81e-04 0.01817
## 1050 -1.06e-03 -0.024108 1.024 2.64e-05 0.00945
## 1051 -6.63e-03 -0.081342 1.022 3.01e-04 0.01346
## 1052  9.97e-03 -0.076278 1.021 2.65e-04 0.01250
## 1053  2.65e-03 -0.018789 1.027 1.61e-05 0.01225
## 1054  3.17e-03  0.065950 1.033 1.98e-04 0.01998
## 1055  1.01e-02  0.059847 1.029 1.63e-04 0.01639
## 1056 -1.12e-02 -0.073179 1.029 2.44e-04 0.01760
```

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## 1057 -5.59e-03  0.292330 0.937 3.87e-03 0.01363    *
## 1058 -6.97e-02  0.209172 0.997 1.99e-03 0.01799
## 1059  2.73e-02  0.215709 1.008 2.11e-03 0.02286
## 1060  2.12e-03 -0.015781 1.021 1.13e-05 0.00612
## 1061 -1.05e-02  0.110797 1.017 5.58e-04 0.01424
## 1062  4.20e-03 -0.031650 1.027 4.56e-05 0.01260
## 1063 -3.41e-03 -0.146266 1.004 9.72e-04 0.01303
## 1064  3.33e-03 -0.020890 1.027 1.98e-05 0.01160
## 1065  5.67e-05 -0.001698 1.027 1.31e-07 0.01128
## 1066 -8.43e-04 -0.056218 1.032 1.44e-04 0.01894
## 1067  9.94e-03 -0.062330 1.018 1.77e-04 0.00884
## 1068  1.26e-02 -0.065828 1.015 1.97e-04 0.00779
## 1069 -1.99e-02  0.190737 0.993 1.65e-03 0.01469
## 1070  1.09e-02 -0.097787 1.020 4.35e-04 0.01469
## 1071 -3.69e-04 -0.104183 1.007 4.93e-04 0.00935
## 1072  1.38e-03 -0.049244 1.029 1.10e-04 0.01555
## 1073  1.49e-03 -0.050160 1.023 1.14e-04 0.01083
## 1074 -2.10e-02 -0.094580 1.023 4.07e-04 0.01580
## 1075  7.95e-03 -0.099837 1.008 4.53e-04 0.00920
## 1076  8.01e-03 -0.031093 1.030 4.40e-05 0.01504
## 1077  3.29e-02  0.078731 1.030 2.82e-04 0.01928
## 1078  2.08e-02  0.269570 0.978 3.30e-03 0.01912
## 1079 -1.63e-02 -0.031573 1.055 4.53e-05 0.03839    *
## 1080 -3.86e-03 -0.069153 1.020 2.17e-04 0.01120
## 1081 -1.30e-02  0.022290 1.036 2.26e-05 0.02075
## 1082  3.31e-02 -0.096869 1.025 4.27e-04 0.01767
## 1083  1.76e-02 -0.118458 1.016 6.38e-04 0.01457
## 1084 -1.11e-01  0.289510 0.956 3.80e-03 0.01640
## 1085  3.30e-03 -0.079115 1.024 2.85e-04 0.01445
## 1086  7.98e-02  0.293676 0.971 3.91e-03 0.01992
## 1087  6.94e-02 -0.354184 1.010 5.69e-03 0.03992
## 1088  2.02e-03 -0.082195 1.024 3.07e-04 0.01515
## 1089  2.44e-03 -0.044839 1.022 9.14e-05 0.00967
## 1090 -6.92e-04 -0.008825 1.023 3.54e-06 0.00788
## 1091 -1.83e-02 -0.076124 1.029 2.64e-04 0.01766
## 1092  1.31e-02 -0.091545 1.014 3.81e-04 0.01078
## 1093 -2.71e-04  0.009280 1.029 3.92e-06 0.01315
## 1094  7.01e-03 -0.143617 1.027 9.38e-04 0.02408
## 1095  3.15e-02 -0.091516 1.024 3.81e-04 0.01586
## 1096  2.78e-02 -0.111232 1.021 5.62e-04 0.01685
## 1097  1.74e-02 -0.095058 1.025 4.11e-04 0.01696
## 1098  1.60e-02 -0.098940 1.013 4.45e-04 0.01095
## 1099 -3.43e-04 -0.021730 1.031 2.15e-05 0.01548
## 1100 -1.04e-03 -0.019874 1.031 1.80e-05 0.01526
## 1101  9.75e-03 -0.088900 1.022 3.59e-04 0.01440
## 1102 -7.27e-03 -0.027584 1.021 3.46e-05 0.00745
## 1103  2.21e-03 -0.097314 1.009 4.30e-04 0.00932
## 1104  1.16e-03  0.006117 1.027 1.70e-06 0.01159
## 1105  4.23e-03 -0.023492 1.023 2.51e-05 0.00852
## 1106  2.38e-03 -0.095112 1.017 4.11e-04 0.01256
```

```
## 1107  3.25e-02   0.274240 0.938 3.41e-03 0.01226    *
## 1108  6.66e-03 -0.032137 1.020 4.70e-05 0.00667
## 1109 -3.43e-03 -0.082751 1.015 3.11e-04 0.00979
## 1110 -2.49e-03 -0.049254 1.026 1.10e-04 0.01332
## 1111 -2.10e-02  0.203558 0.986 1.88e-03 0.01431
## 1112 -1.72e-01  0.721659 0.883 2.35e-02 0.04153    *
## 1113  3.92e-02  0.226453 0.898 2.32e-03 0.00598    *
## 1114  6.93e-04 -0.002819 1.032 3.62e-07 0.01630
## 1115 -1.43e-02 -0.070886 1.023 2.28e-04 0.01350
## 1116  1.45e-02 -0.120507 1.014 6.60e-04 0.01395
## 1117 -1.02e-03  0.079078 1.063 2.84e-04 0.04713    *
## 1118  2.20e-03 -0.016183 1.023 1.19e-05 0.00804
## 1119  6.26e-03 -0.046691 1.023 9.91e-05 0.01028
## 1120 -3.49e-03 -0.021485 1.028 2.10e-05 0.01245
## 1121  3.88e-03 -0.070937 1.017 2.29e-04 0.00957
## 1122  7.11e-03 -0.047035 1.018 1.01e-04 0.00722
## 1123  2.22e-02 -0.155226 1.009 1.09e-03 0.01590
## 1124 -1.86e-02 -0.111023 0.998 5.60e-04 0.00748
## 1125  4.60e-03  0.039665 1.028 7.16e-05 0.01406
## 1126  1.06e-03 -0.032612 1.032 4.84e-05 0.01686
## 1127  1.65e-03 -0.055297 1.030 1.39e-04 0.01686
## 1128  2.71e-04 -0.007760 1.024 2.74e-06 0.00877
## 1129  5.70e-03 -0.145916 1.007 9.67e-04 0.01428
## 1130 -1.80e-04 -0.003094 1.038 4.35e-07 0.02197
## 1131 -2.04e-03 -0.026045 1.029 3.09e-05 0.01402
## 1132 -2.58e-02 -0.083255 1.023 3.15e-04 0.01463
## 1133  5.89e-03 -0.030943 1.025 4.35e-05 0.01045
## 1134 -1.63e-04  0.001116 1.033 5.66e-08 0.01722
## 1135 -1.41e-03 -0.034075 1.022 5.28e-05 0.00840
## 1136 -2.30e-03 -0.013615 1.066 8.43e-06 0.04787    *
## 1137 -2.66e-02  0.171109 0.979 1.33e-03 0.00958
## 1138 -7.99e-03 -0.185153 1.005 1.56e-03 0.01789
## 1139 -1.70e-03 -0.165913 1.033 1.25e-03 0.03049
## 1140  9.16e-05 -0.002076 1.025 1.96e-07 0.00903
## 1141 -1.23e-03 -0.016168 1.039 1.19e-05 0.02272
## 1142  3.11e-02 -0.082402 1.013 3.09e-04 0.00900
## 1143  2.61e-02 -0.178868 0.999 1.45e-03 0.01530
## 1144  1.03e-02 -0.095447 1.027 4.14e-04 0.01889
## 1145  2.07e-03 -0.081170 1.016 3.00e-04 0.01015
## 1146  1.14e-02 -0.068511 1.010 2.13e-04 0.00635
## 1147  1.13e-02 -0.029618 1.031 3.99e-05 0.01645
## 1148  7.62e-03 -0.052300 1.025 1.24e-04 0.01290
## 1149 -8.34e-03 -0.037597 1.023 6.43e-05 0.00961
## 1150 -8.82e-03 -0.039852 1.029 7.22e-05 0.01524
## 1151 -8.69e-04  0.014183 1.035 9.15e-06 0.01918
## 1152  4.87e-02 -0.175276 1.014 1.40e-03 0.02049
## 1153  3.58e-04 -0.054745 1.020 1.36e-04 0.00915
## 1154 -1.24e-02  0.175240 0.997 1.39e-03 0.01418
## 1155 -4.78e-03  0.024703 1.035 2.78e-05 0.01917
## 1156  9.03e-04  0.012650 1.028 7.28e-06 0.01276
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```
## 1157 -5.49e-03 -0.050205 1.032 1.15e-04 0.01788
## 1158  8.47e-04  0.047797 1.030 1.04e-04 0.01636
## 1159  2.75e-03 -0.018610 1.020 1.58e-05 0.00534
## 1160 -4.21e-02 -0.126982 1.016 7.33e-04 0.01573
## 1161  1.96e-02  0.053077 1.025 1.28e-04 0.01301
## 1162  6.49e-03 -0.059258 1.025 1.60e-04 0.01343
## 1163 -2.70e-01  0.379299 0.932 6.51e-03 0.02014    *
## 1164 -1.87e-02 -0.077669 1.024 2.74e-04 0.01465
## 1165 -4.06e-03 -0.116344 1.011 6.15e-04 0.01232
## 1166  4.07e-02 -0.117524 1.020 6.28e-04 0.01688
## 1167 -5.85e-04 -0.011638 1.037 6.16e-06 0.02065
## 1168  1.12e-02  0.202172 0.988 1.86e-03 0.01466
## 1169  8.79e-03 -0.197141 0.990 1.76e-03 0.01449
## 1170  1.08e-03 -0.018159 1.022 1.50e-05 0.00762
## 1171  6.57e-03 -0.074900 1.019 2.55e-04 0.01118
## 1172  2.51e-03  0.170065 1.001 1.31e-03 0.01486
## 1173 -1.09e-02 -0.060543 1.013 1.67e-04 0.00634
## 1174  1.94e-03 -0.039203 1.023 6.99e-05 0.00992
## 1175  5.65e-03  0.032497 1.029 4.80e-05 0.01435
## 1176  7.46e-03 -0.016216 1.024 1.20e-05 0.00870
## 1177  9.61e-04 -0.038959 1.029 6.90e-05 0.01442
## 1178  1.02e-02  0.035168 1.034 5.63e-05 0.01897
## 1179  1.33e-03 -0.063622 1.018 1.84e-04 0.00912
## 1180  3.33e-03  0.011729 1.025 6.26e-06 0.00941
## 1181  3.25e-03 -0.092515 1.015 3.89e-04 0.01111
## 1182 -5.22e-03 -0.014385 1.031 9.41e-06 0.01575
## 1183 -8.66e-05  0.004766 1.030 1.03e-06 0.01414
## 1184  1.11e-03  0.030064 1.026 4.11e-05 0.01118
## 1185  3.73e-03  0.042192 1.038 8.10e-05 0.02314
## 1186  9.13e-03  0.028720 1.036 3.75e-05 0.02074
## 1187  8.39e-04  0.294742 0.963 3.94e-03 0.01824
## 1188  5.52e-03  0.066187 1.029 1.99e-04 0.01740
## 1189 -7.48e-02 -0.176168 1.014 1.41e-03 0.02088
## 1190  3.17e-03  0.027729 1.025 3.50e-05 0.01040
## 1191  4.49e-04  0.004305 1.024 8.43e-07 0.00829
## 1192  7.49e-03 -0.037047 1.026 6.24e-05 0.01240
## 1193  2.85e-04 -0.115987 1.018 6.12e-04 0.01536
## 1194 -5.00e-04 -0.119246 1.015 6.46e-04 0.01432
## 1195 -4.71e-04  0.043709 1.032 8.69e-05 0.01756
## 1196  9.80e-05 -0.000194 1.030 1.71e-09 0.01409
## 1197 -6.36e-03 -0.119861 1.020 6.53e-04 0.01726
## 1198  2.08e-03 -0.079756 1.013 2.89e-04 0.00876
## 1199  1.03e-02 -0.057221 1.033 1.49e-04 0.01955
## 1200  2.29e-03 -0.054435 1.020 1.35e-04 0.00937
## 1201 -2.70e-03 -0.056056 1.023 1.43e-04 0.01122
## 1202 -2.23e-02  0.196026 0.980 1.74e-03 0.01218
## 1203  6.08e-04 -0.008115 1.025 3.00e-06 0.00912
## 1204 -2.13e-03  0.026701 1.033 3.24e-05 0.01760
## 1205  4.04e-02  0.311229 0.954 4.39e-03 0.01797    *
## 1206 -3.41e-02  0.241174 0.934 2.63e-03 0.00944    *
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## 1207 -6.41e-04 -0.003915 1.031 6.97e-07 0.01530
## 1208  4.53e-04 -0.088044 1.031 3.53e-04 0.02053
## 1209  1.19e-02  0.025900 1.030 3.05e-05 0.01474
## 1210 -1.07e-04  0.021915 1.038 2.18e-05 0.02241
## 1211  3.28e-03  0.008707 1.033 3.45e-06 0.01693
## 1212 -2.63e-03 -0.079579 1.033 2.88e-04 0.02127
## 1213 -3.30e-03 -0.059594 1.024 1.62e-04 0.01300
## 1214 -4.06e-03  0.270691 0.946 3.32e-03 0.01314    *
## 1215 -1.77e-03 -0.010745 1.033 5.25e-06 0.01686
## 1216 -2.16e-02 -0.211162 0.997 2.02e-03 0.01814
## 1217 -5.61e-03 -0.026230 1.028 3.13e-05 0.01284
## 1218 -5.24e-04 -0.005354 1.024 1.30e-06 0.00850
## 1219 -1.77e-03 -0.020928 1.027 1.99e-05 0.01165
## 1220  1.90e-03 -0.010641 1.022 5.15e-06 0.00691
## 1221  1.60e-03 -0.031131 1.023 4.41e-05 0.00942
## 1222  1.78e-03 -0.003194 1.053 4.64e-07 0.03557    *
## 1223 -2.02e-02  0.253028 0.960 2.90e-03 0.01367
## 1224  1.49e-02  0.391746 0.975 6.96e-03 0.03123    *
## 1225 -1.18e-03 -0.065236 1.022 1.94e-04 0.01198
## 1226  2.37e-02 -0.109647 1.029 5.47e-04 0.02164
## 1227  8.33e-04 -0.088052 1.014 3.52e-04 0.01009
## 1228 -6.62e-04 -0.015869 1.022 1.15e-05 0.00695
## 1229 -1.56e-04 -0.040728 1.028 7.54e-05 0.01405
## 1230  1.40e-02 -0.123401 1.008 6.92e-04 0.01204
## 1231  1.23e-02 -0.106060 1.023 5.11e-04 0.01715
## 1232 -6.27e-03 -0.018557 1.026 1.57e-05 0.01059
## 1233  4.51e-03  0.019712 1.028 1.77e-05 0.01269
## 1234 -1.69e-02 -0.044262 1.030 8.91e-05 0.01638
## 1235  2.62e-03 -0.026860 1.037 3.28e-05 0.02128
## 1236  5.64e-03 -0.025142 1.027 2.88e-05 0.01236
## 1237  6.22e-03  0.223430 0.979 2.27e-03 0.01452
## 1238 -1.08e-02  0.206563 0.979 1.94e-03 0.01285
## 1239  8.45e-03 -0.112592 1.011 5.76e-04 0.01195
## 1240 -1.87e-03 -0.092784 1.023 3.91e-04 0.01570
## 1241 -4.95e-04 -0.002138 1.031 2.08e-07 0.01532
## 1242  3.98e-03 -0.081969 1.027 3.06e-04 0.01729
## 1243  1.34e-02 -0.090623 1.029 3.73e-04 0.01933
## 1244 -4.22e-03 -0.032359 1.032 4.76e-05 0.01724
## 1245 -1.41e-02 -0.099078 1.024 4.46e-04 0.01691
## 1246  1.07e-02 -0.080461 1.015 2.94e-04 0.00963
## 1247 -1.49e-02  0.250894 0.941 2.85e-03 0.01092    *
## 1248  2.64e-03 -0.031799 1.022 4.60e-05 0.00810
## 1249 -5.15e-03 -0.049268 1.018 1.10e-04 0.00771
## 1250  4.43e-03  0.165170 0.981 1.24e-03 0.00942
## 1251  2.70e-03 -0.114763 1.017 5.99e-04 0.01475
## 1252 -5.68e-03 -0.030525 1.030 4.24e-05 0.01512
## 1253  8.92e-04 -0.055455 1.027 1.40e-04 0.01412
## 1254 -7.84e-05 -0.002729 1.030 3.39e-07 0.01454
## 1255  1.17e-03  0.006867 1.031 2.15e-06 0.01518
## 1256 -1.60e-02  0.165965 1.007 1.25e-03 0.01650
```

```
## 1257 -1.82e-02 -0.074466 1.018 2.52e-04 0.01066
## 1258 -3.40e-02  0.259437 0.928 3.05e-03 0.01007     *
## 1259  6.81e-03 -0.060340 1.021 1.66e-04 0.01055
## 1260 -1.77e-03 -0.004277 1.028 8.32e-07 0.01199
## 1261 -5.25e-03 -0.031922 1.029 4.63e-05 0.01437
## 1262  7.38e-03 -0.147337 1.003 9.86e-04 0.01294
## 1263 -1.17e-02  0.179926 0.986 1.47e-03 0.01172
## 1264 -2.60e-03 -0.030709 1.024 4.29e-05 0.00991
## 1265  5.74e-04 -0.013235 1.038 7.97e-06 0.02185
## 1266  2.30e-03  0.050419 1.031 1.16e-04 0.01765
## 1267 -1.94e-03 -0.022515 1.025 2.31e-05 0.01055
## 1268 -4.43e-03  0.021909 1.042 2.18e-05 0.02599
## 1269  1.76e-04 -0.086886 1.035 3.43e-04 0.02388
## 1270 -4.56e-03 -0.017064 1.028 1.32e-05 0.01274
## 1271 -4.14e-03 -0.073185 1.021 2.44e-04 0.01186
## 1272 -3.14e-02  0.183669 0.969 1.53e-03 0.00913
## 1273 -1.42e-03 -0.010983 1.025 5.49e-06 0.00942
## 1274 -2.25e-02  0.178244 0.976 1.44e-03 0.00970
## 1275 -3.04e-03 -0.075994 1.023 2.63e-04 0.01372
## 1276 -9.78e-04 -0.012381 1.027 6.97e-06 0.01178
## 1277 -1.01e-03 -0.049134 1.018 1.10e-04 0.00750
## 1278 -2.10e-03 -0.020333 1.033 1.88e-05 0.01772
## 1279 -8.61e-04 -0.065361 1.021 1.94e-04 0.01118
## 1280 -2.35e-03  0.240357 0.973 2.62e-03 0.01490
## 1281 -7.14e-03 -0.029225 1.032 3.88e-05 0.01702
## 1282  2.46e-02  0.219429 0.974 2.18e-03 0.01309
## 1283  7.16e-04 -0.008820 1.029 3.54e-06 0.01382
## 1284 -1.11e-05  0.008633 1.025 3.39e-06 0.00925
## 1285  1.28e-03 -0.036352 1.027 6.01e-05 0.01252
## 1286 -4.27e-03 -0.115841 1.026 6.10e-04 0.01996
## 1287  4.29e-03 -0.034769 1.022 5.50e-05 0.00868
## 1288  4.96e-03 -0.039091 1.023 6.95e-05 0.01022
## 1289  1.29e-02  0.068548 1.027 2.14e-04 0.01564
## 1290  1.04e-03  0.020568 1.035 1.92e-05 0.01968
## 1291  1.08e-01  0.320267 0.934 4.64e-03 0.01543     *
## 1292  7.98e-02  0.303648 0.941 4.18e-03 0.01512     *
## 1293 -1.24e-03 -0.037280 1.026 6.32e-05 0.01236
## 1294  4.72e-03 -0.084040 1.023 3.21e-04 0.01474
## 1295  4.94e-03 -0.071058 1.021 2.30e-04 0.01220
## 1296  4.18e-02 -0.080005 1.037 2.91e-04 0.02430
## 1297  2.00e-02 -0.056662 1.021 1.46e-04 0.01051
## 1298  3.57e-02  0.198529 0.965 1.79e-03 0.00970
## 1299  6.82e-02  0.391480 0.884 6.92e-03 0.01493     *
## 1300  2.33e-04  0.026149 1.021 3.11e-05 0.00698
## 1301  3.38e-03  0.016444 1.024 1.23e-05 0.00870
## 1302  2.50e-02  0.074798 1.052 2.54e-04 0.03679     *
## 1303  1.68e-04 -0.087504 1.022 3.48e-04 0.01448
## 1304  7.59e-03 -0.108570 1.027 5.36e-04 0.01995
## 1305 -1.36e-02 -0.051755 1.025 1.22e-04 0.01258
## 1306  1.57e-02  0.035717 1.027 5.80e-05 0.01273
```

```
## 1307  3.78e-03 -0.094500 1.016 4.06e-04 0.01206
## 1308  1.71e-03 -0.042945 1.025 8.39e-05 0.01187
## 1309 -9.04e-03 -0.133338 1.018 8.08e-04 0.01759
## 1310  8.36e-03 -0.041901 1.018 7.98e-05 0.00678
## 1311 -8.98e-03 -0.118574 1.021 6.39e-04 0.01774
## 1312  1.53e-02 -0.135517 1.022 8.35e-04 0.02000
## 1313 -4.10e-02  0.283710 0.923 3.64e-03 0.01133    *
## 1314 -3.12e-02  0.152212 1.001 1.05e-03 0.01275
## 1315  8.83e-03  0.057396 1.028 1.50e-04 0.01582
## 1316  7.74e-03 -0.079046 1.020 2.84e-04 0.01210
## 1317 -6.07e-03 -0.032076 1.032 4.68e-05 0.01743
## 1318  2.18e-02 -0.135542 1.004 8.35e-04 0.01204
## 1319 -2.92e-03 -0.009046 1.034 3.72e-06 0.01805
## 1320  3.53e-03 -0.058227 1.025 1.54e-04 0.01362
## 1321  1.04e-03 -0.013549 1.031 8.35e-06 0.01542
## 1322  1.81e-02 -0.072570 1.017 2.39e-04 0.00958
## 1323  7.67e-03  0.058737 1.024 1.57e-04 0.01225
## 1324 -2.99e-04  0.008033 1.030 2.94e-06 0.01421
## 1325 -2.22e-02 -0.074662 1.032 2.54e-04 0.01998
## 1326  2.23e-03 -0.036121 1.021 5.93e-05 0.00831
## 1327  1.21e-02  0.177861 0.994 1.44e-03 0.01346
## 1328 -2.40e-02  0.081663 1.040 3.03e-04 0.02698
## 1329 -1.09e-02 -0.058434 1.025 1.55e-04 0.01295
## 1330  5.73e-03 -0.054845 1.019 1.37e-04 0.00858
## 1331  1.35e-02  0.027873 1.033 3.53e-05 0.01788
## 1332 -6.00e-04  0.005397 1.031 1.32e-06 0.01537
## 1333 -1.32e-02  0.167086 1.010 1.27e-03 0.01774
## 1334  6.53e-02  0.348501 0.866 5.48e-03 0.01071    *
## 1335  2.36e-02 -0.144675 1.015 9.51e-04 0.01752
## 1336  3.81e-05  0.004979 1.026 1.13e-06 0.01058
## 1337  2.28e-03  0.017032 1.034 1.32e-05 0.01866
## 1338  6.67e-03 -0.042204 1.018 8.10e-05 0.00659
## 1339 -3.41e-02  0.202016 0.947 1.85e-03 0.00792    *
## 1340 -2.33e-02  0.184653 0.985 1.55e-03 0.01202
## 1341 -8.06e-03 -0.070495 1.016 2.26e-04 0.00896
## 1342  1.35e-02 -0.030434 1.030 4.21e-05 0.01483
## 1343  1.72e-02 -0.053794 1.021 1.32e-04 0.01020
## 1344  6.35e-03 -0.069468 1.016 2.19e-04 0.00879
## 1345 -4.92e-03 -0.075441 1.022 2.59e-04 0.01285
## 1346 -1.14e-03 -0.116814 1.008 6.20e-04 0.01114
## 1347 -7.55e-03 -0.029743 1.027 4.02e-05 0.01278
## 1348 -3.17e-02 -0.100493 1.028 4.59e-04 0.01992
## 1349 -6.48e-03 -0.011990 1.044 6.54e-06 0.02758
## 1350  1.28e-02 -0.141801 0.995 9.13e-04 0.01005
## 1351 -5.41e-03 -0.038182 1.026 6.63e-05 0.01217
## 1352 -2.29e-02  0.066464 1.047 2.01e-04 0.03204    *
## 1353 -9.01e-04 -0.029878 1.026 4.06e-05 0.01119
## 1354 -5.65e-02  0.260442 0.993 3.08e-03 0.02230
## 1355 -6.72e-02  0.354308 0.952 5.69e-03 0.02151    *
## 1356 -2.09e-03 -0.079953 1.019 2.91e-04 0.01185
```

```
## 1357 -2.37e-04 -0.008042 1.023 2.94e-06 0.00761
## 1358  3.34e-04  0.005138 1.027 1.20e-06 0.01147
## 1359 -1.05e-02 -0.053061 1.020 1.28e-04 0.00917
## 1360  7.86e-03 -0.074706 1.016 2.54e-04 0.00956
## 1361  6.24e-04 -0.040953 1.025 7.63e-05 0.01184
## 1362 -2.76e-03 -0.016883 1.030 1.30e-05 0.01415
## 1363 -3.04e-03 -0.062696 1.021 1.79e-04 0.01075
## 1364 -2.32e-02 -0.051634 1.021 1.21e-04 0.00972
## 1365 -2.55e-02 -0.095771 1.019 4.17e-04 0.01378
## 1366 -3.72e-02  0.226128 0.979 2.32e-03 0.01484
## 1367  4.06e-05 -0.085822 1.028 3.35e-04 0.01856
## 1368  9.76e-03 -0.052795 1.020 1.27e-04 0.00904
## 1369 -3.28e-02 -0.115370 1.016 6.05e-04 0.01427
## 1370  3.13e-02  0.243026 0.975 2.68e-03 0.01572
## 1371  8.47e-03  0.050763 1.027 1.17e-04 0.01432
## 1372  8.35e-04 -0.037729 1.032 6.47e-05 0.01770
## 1373 -3.61e-02 -0.094481 1.032 4.06e-04 0.02238
## 1374  3.01e-02 -0.119244 1.037 6.47e-04 0.02847
## 1375  1.61e-04 -0.052991 1.036 1.28e-04 0.02143
## 1376  8.09e-03  0.184128 0.994 1.54e-03 0.01423
## 1377  5.66e-04  0.009845 1.028 4.41e-06 0.01256
## 1378 -1.17e-05  0.011557 1.033 6.08e-06 0.01713
## 1379  4.47e-03 -0.078528 1.019 2.80e-04 0.01131
## 1380 -1.85e-02  0.202405 0.985 1.86e-03 0.01380
## 1381 -4.34e-03 -0.070573 1.019 2.26e-04 0.01039
## 1382 -2.80e-03 -0.056682 1.023 1.46e-04 0.01165
## 1383 -4.64e-03 -0.099211 1.025 4.48e-04 0.01755
## 1384  1.21e-03 -0.007177 1.033 2.34e-06 0.01711
## 1385  4.05e-02 -0.069829 1.032 2.22e-04 0.01962
## 1386 -4.55e-03  0.010338 1.030 4.86e-06 0.01435
## 1387 -4.45e-03 -0.111416 1.017 5.64e-04 0.01429
## 1388  1.35e-02 -0.079133 1.019 2.85e-04 0.01181
## 1389 -9.09e-04  0.016395 1.029 1.22e-05 0.01399
## 1390 -6.34e-03 -0.110935 1.025 5.60e-04 0.01900
## 1391  2.84e-02  0.297481 0.926 4.01e-03 0.01261  *
## 1392  2.01e-02 -0.173811 1.014 1.37e-03 0.02053
## 1393 -8.62e-03 -0.023568 1.025 2.53e-05 0.01049
## 1394 -5.25e-04 -0.002291 1.025 2.39e-07 0.00944
## 1395  1.88e-03 -0.050489 1.029 1.16e-04 0.01588
## 1396  5.44e-02  0.250073 0.972 2.84e-03 0.01566
## 1397  4.81e-03  0.194425 0.999 1.72e-03 0.01685
## 1398  4.72e-04 -0.046049 1.030 9.64e-05 0.01606
## 1399  2.66e-03  0.010414 1.028 4.93e-06 0.01270
## 1400  3.42e-03  0.014272 1.030 9.26e-06 0.01488
## 1401  1.08e-02 -0.113558 1.014 5.86e-04 0.01338
## 1402  4.37e-03 -0.025458 1.039 2.95e-05 0.02357
## 1403  4.40e-03 -0.119631 1.017 6.51e-04 0.01534
## 1404 -1.80e-03 -0.098049 1.021 4.37e-04 0.01476
## 1405  1.14e-02 -0.047565 1.038 1.03e-04 0.02334
## 1406  7.82e-03  0.042811 1.028 8.34e-05 0.01454
```

```
## 1407 -1.55e-02 -0.146224 1.011 9.72e-04 0.01579
## 1408  1.21e-02 -0.089622 1.011 3.65e-04 0.00899
## 1409 -4.96e-03 -0.036213 1.023 5.96e-05 0.00992
## 1410  8.29e-03 -0.033875 1.029 5.22e-05 0.01469
## 1411 -1.53e-03 -0.003440 1.023 5.38e-07 0.00782
## 1412 -2.26e-03 -0.040472 1.020 7.45e-05 0.00749
## 1413 -8.09e-08  0.000514 1.026 1.20e-08 0.01040
## 1414 -1.81e-03 -0.074066 1.020 2.49e-04 0.01146
## 1415 -1.41e-03 -0.065953 1.036 1.98e-04 0.02302
## 1416  5.32e-03 -0.041928 1.029 8.00e-05 0.01479
## 1417 -6.14e-03  0.035175 1.026 5.63e-05 0.01217
## 1418 -3.79e-04 -0.034307 1.020 5.35e-05 0.00697
## 1419 -3.08e-02 -0.101293 1.016 4.66e-04 0.01290
## 1420  1.00e-02 -0.105606 1.014 5.07e-04 0.01244
## 1421 -5.80e-03  0.016221 1.027 1.20e-05 0.01131
## 1422  2.39e-02  0.061321 1.037 1.71e-04 0.02330
## 1423 -3.70e-03 -0.074657 1.016 2.53e-04 0.00952
## 1424  1.30e-03 -0.042932 1.022 8.38e-05 0.00916
## 1425 -5.21e-03 -0.021274 1.024 2.06e-05 0.00887
## 1426  6.04e-02 -0.130213 1.013 7.71e-04 0.01492
## 1427  3.82e-02 -0.152986 1.000 1.06e-03 0.01251
## 1428  4.95e-03 -0.035756 1.023 5.81e-05 0.00941
## 1429 -7.05e-04 -0.058018 1.014 1.53e-04 0.00663
## 1430 -9.74e-03 -0.062687 1.028 1.79e-04 0.01590
## 1431  1.69e-04  0.003505 1.042 5.59e-07 0.02587
## 1432 -3.64e-03  0.026225 1.022 3.13e-05 0.00787
## 1433  1.51e-03 -0.027682 1.037 3.49e-05 0.02164
## 1434 -8.18e-03 -0.112087 1.018 5.71e-04 0.01483
## 1435  9.22e-03 -0.022758 1.049 2.36e-05 0.03199    *
## 1436  7.07e-03 -0.106489 1.011 5.15e-04 0.01098
## 1437  2.22e-03 -0.155316 0.986 1.10e-03 0.00945
## 1438  8.34e-04  0.015848 1.042 1.14e-05 0.02596
## 1439 -3.80e-02  0.251152 0.965 2.86e-03 0.01435
## 1440  3.93e-03 -0.023436 1.028 2.50e-05 0.01287
## 1441  2.00e-03 -0.025038 1.030 2.85e-05 0.01474
## 1442  6.44e-03  0.124259 1.031 7.02e-04 0.02408
## 1443  1.58e-02  0.265350 0.960 3.19e-03 0.01490
## 1444  8.28e-03  0.020522 1.036 1.92e-05 0.02068
## 1445  4.64e-02  0.447592 0.903 9.06e-03 0.02136    *
## 1446 -4.13e-03 -0.046238 1.035 9.72e-05 0.02069
## 1447 -3.02e-03 -0.013920 1.028 8.81e-06 0.01287
## 1448  3.04e-04  0.002357 1.046 2.53e-07 0.02974    *
## 1449 -1.47e-03 -0.010925 1.025 5.43e-06 0.00951
## 1450  6.72e-03 -0.058474 1.015 1.55e-04 0.00718
## 1451 -4.58e-02 -0.140260 1.019 8.94e-04 0.01892
## 1452  1.18e-03  0.003323 1.027 5.02e-07 0.01143
## 1453 -7.71e-02  0.326853 0.909 4.83e-03 0.01290    *
## 1454  1.62e-02 -0.042100 1.022 8.06e-05 0.00960
## 1455  1.12e-02 -0.041664 1.023 7.89e-05 0.00984
## 1456 -1.91e-03 -0.054952 1.017 1.37e-04 0.00758
```

```
## 1457   2.65e-02 -0.121197 1.014 6.68e-04 0.01413
## 1458 -7.28e-04  0.005334 1.030 1.29e-06 0.01415
## 1459   8.03e-03 -0.052226 1.023 1.24e-04 0.01107
## 1460 -3.17e-03 -0.098817 1.013 4.44e-04 0.01100
## 1461 -5.97e-03 -0.160407 1.010 1.17e-03 0.01713
## 1462 -4.21e-02  0.265461 0.975 3.20e-03 0.01798
## 1463   2.15e-02 -0.060362 1.029 1.66e-04 0.01629
## 1464 -1.32e-02 -0.066928 1.031 2.04e-04 0.01879
## 1465   2.14e-02 -0.069947 1.018 2.22e-04 0.00977
## 1466   9.02e-04 -0.020905 1.035 1.99e-05 0.01920
## 1467 -2.04e-03 -0.007648 1.027 2.66e-06 0.01113
## 1468   3.50e-03 -0.094826 1.018 4.09e-04 0.01293
## 1469 -4.52e-03 -0.015602 1.029 1.11e-05 0.01336
## 1470   7.64e-05 -0.000586 1.025 1.56e-08 0.00930

#diagnostic plots
plot(x)
```
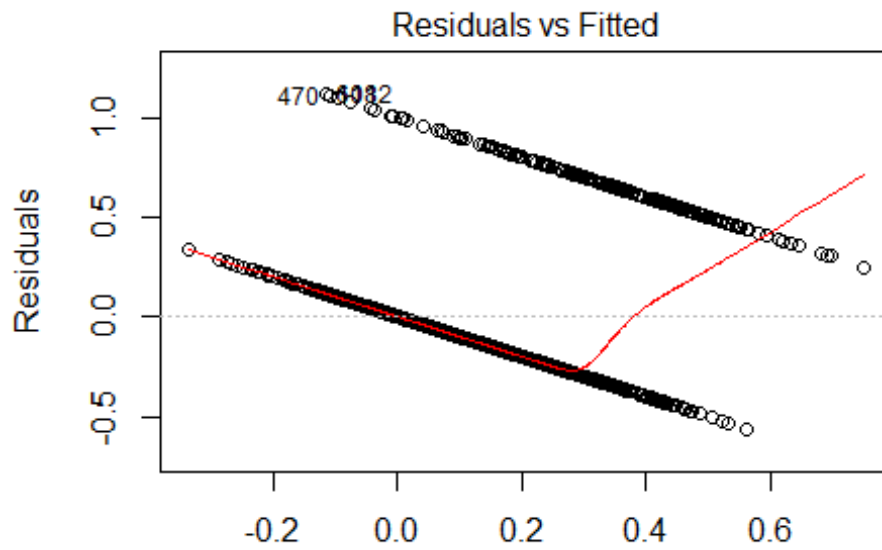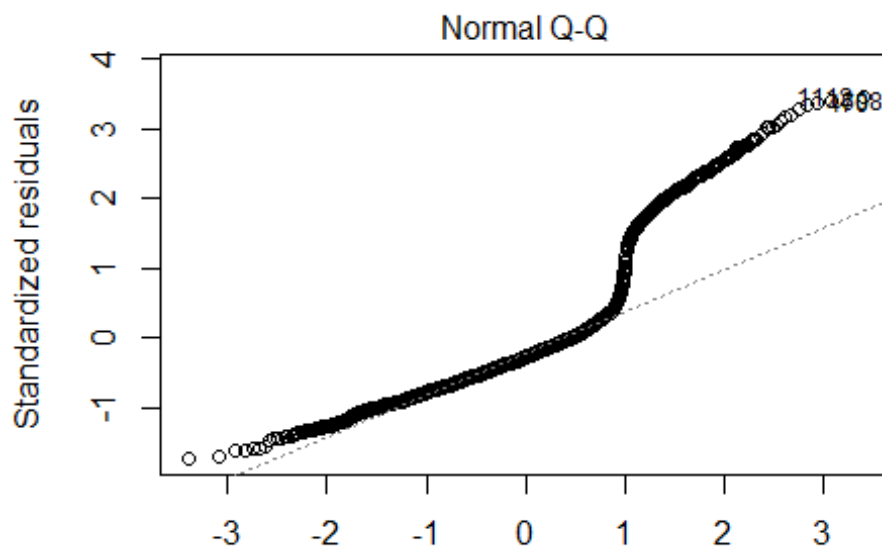
Residuals vs Fitted

470 **682**

Residuals

Fitted values
ĩ.Age + BusinessTravel + DailyRate + DistanceFromHome

Normal Q-Q

11**1**0**3**08

Standardized residuals

Theoretical Quantiles
ĩ.Age + BusinessTravel + DailyRate + DistanceFromHome

Scale-Location

√|Standardized residuals|

Fitted values
Attrition ~ ï..Age + BusinessTravel + DailyRate + DistanceFromHome

Residuals vs Leverage
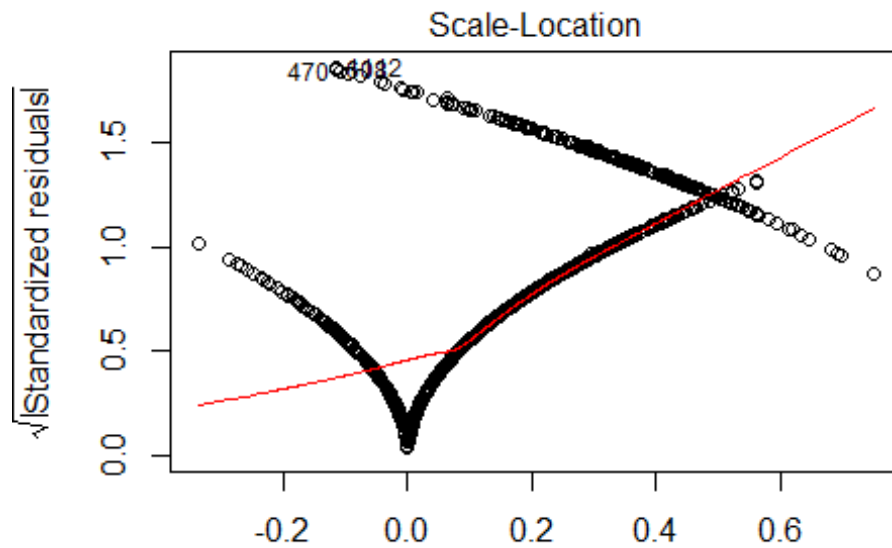
Standardized residuals
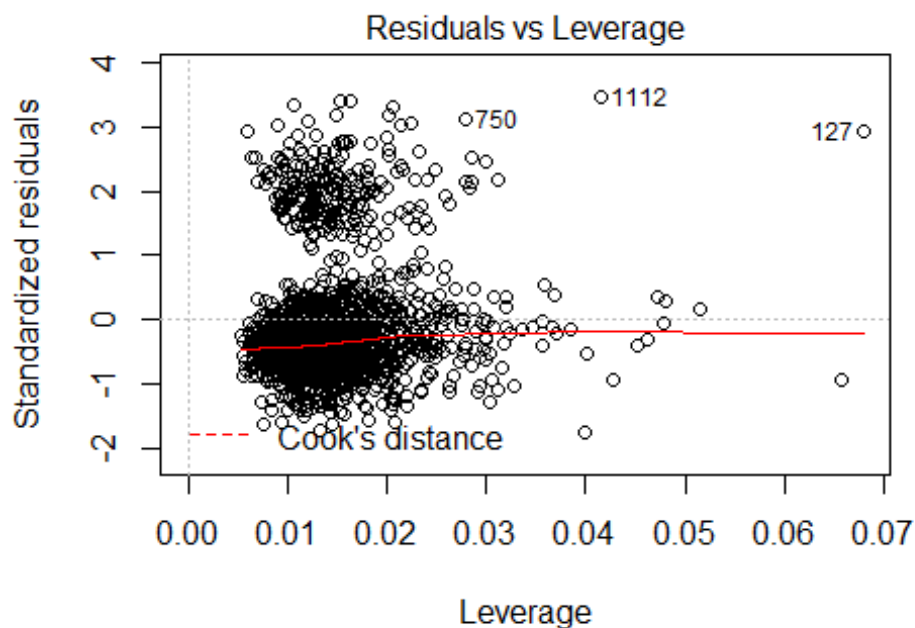
Leverage
Attrition ~ ï..Age + BusinessTravel + DailyRate + DistanceFromHome

```
# Assessing Outliers
outlierTest(x)
```

```
## No Studentized residuals with Bonferroni p < 0.05
## Largest |rstudent|:
##       rstudent unadjusted p-value Bonferroni p
## 1112 3.466883         0.00054195      0.79666

qqPlot(x, main="QQ Plot")

## Warning in rlm.default(x, y, weights, method = method, wt.method =
## wt.method, :
## 'rlm' failed to converge in 20 steps
```

QQ Plot
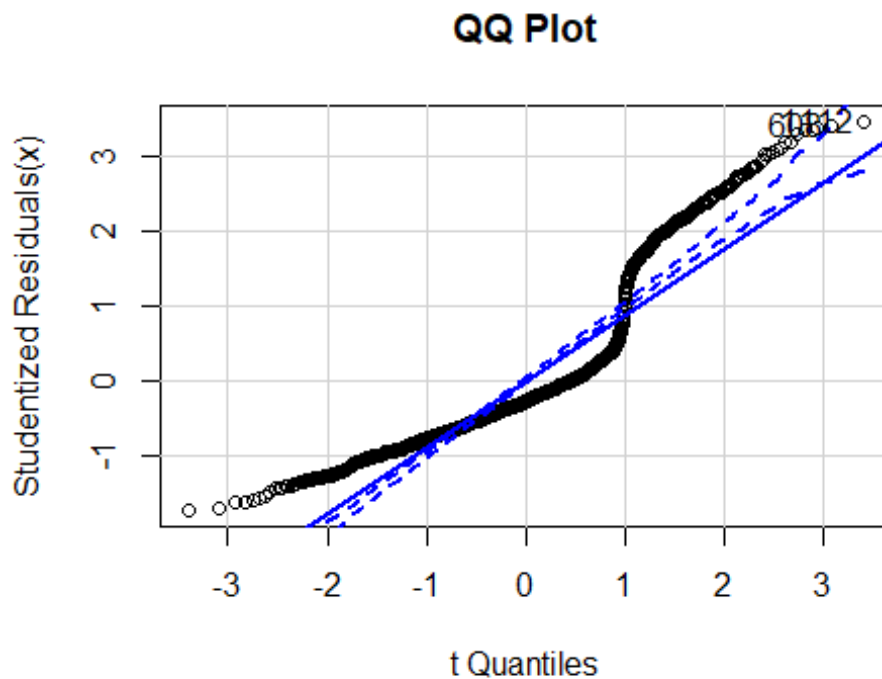

```
## [1]  608 1112

# Cook's D plot
# identify D values > 4/(n-k-1)
cutoff <- 4/((nrow(emp_churn)-length(x$coefficients)-2))
plot(x, which=4, cook.levels=cutoff)
```
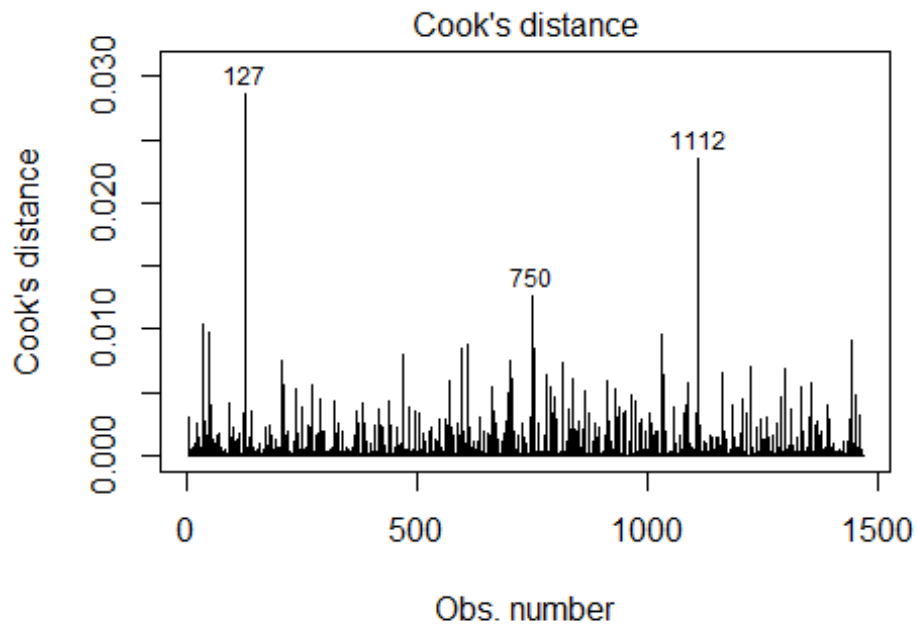
Cook's distance

Attrition ~ ï..Age + BusinessTravel + DailyRate + DistanceFromHome

```r
# Influence Plot
influencePlot(x, id.method="identify", main="Influence Plot", sub="Circle
size is proportial to Cook's Distance" )
```

```
## Warning in plot.window(...): "id.method" is not a graphical parameter

## Warning in plot.xy(xy, type, ...): "id.method" is not a graphical
parameter

## Warning in axis(side = side, at = at, labels = labels, ...): "id.method"
is not
## a graphical parameter

## Warning in axis(side = side, at = at, labels = labels, ...): "id.method"
is not
## a graphical parameter

## Warning in box(...): "id.method" is not a graphical parameter

## Warning in title(...): "id.method" is not a graphical parameter

## Warning in plot.xy(xy.coords(x, y), type = type, ...): "id.method" is not
a
## graphical parameter
```

Influence Plot

Circle size is proportial to Cook's Distance
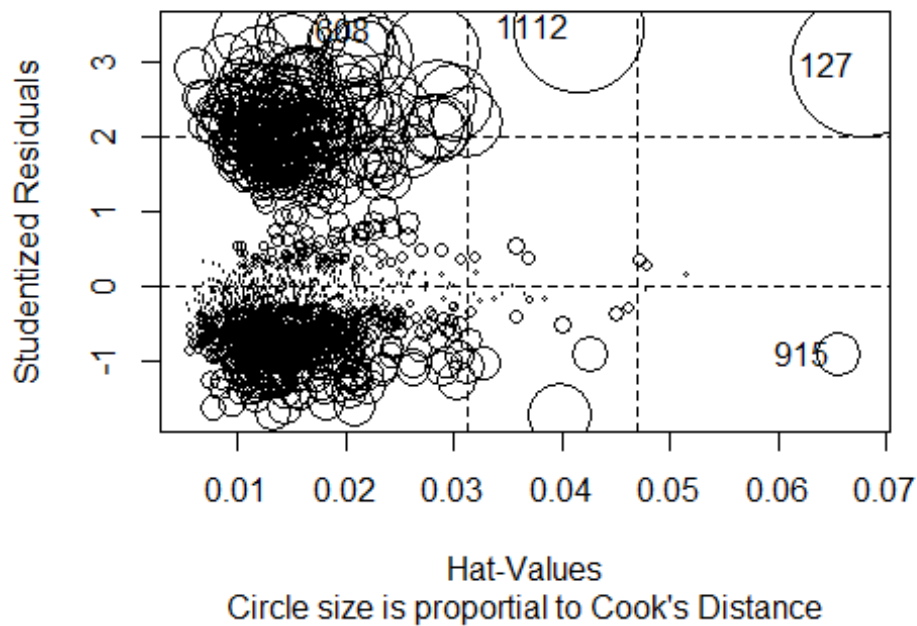
```
##          StudRes        Hat        CookD
## 127     2.9438840 0.06790998 0.028549672
## 608     3.4219376 0.01638551 0.008801489
## 915    -0.9268187 0.06569735 0.002745803
## 1112    3.4668834 0.04153019 0.023493555

# Normality of Residuals
# qq plot for studentized resid
qqPlot(x, main="QQ Plot")

## Warning in rlm.default(x, y, weights, method = method, wt.method =
wt.method, :
## 'rlm' failed to converge in 20 steps
```

QQ Plot
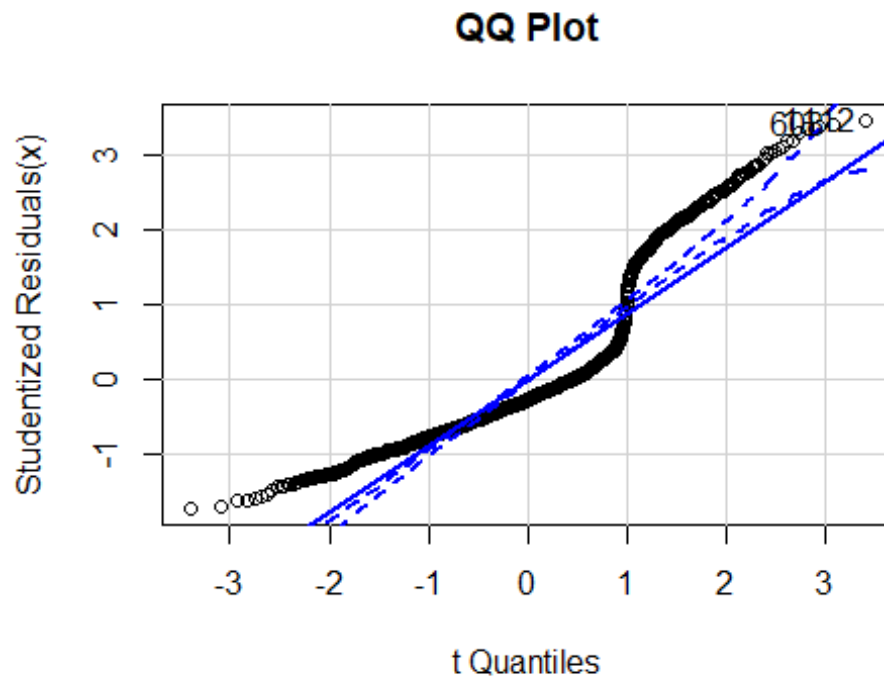

```
## [1]  608 1112
```

```
# distribution of studentized residuals
library(MASS)
```

```
##
## Attaching package: 'MASS'
```

```
## The following object is masked from 'package:dplyr':
##
##     select
```

```
sresid <- studres(x)
hist(sresid, freq=FALSE,
     main="Distribution of Studentized Residuals")
xfit<-seq(min(sresid),max(sresid),length=40)
yfit<-dnorm(xfit)
lines(xfit, yfit)
```

Distribution of Studentized Residuals
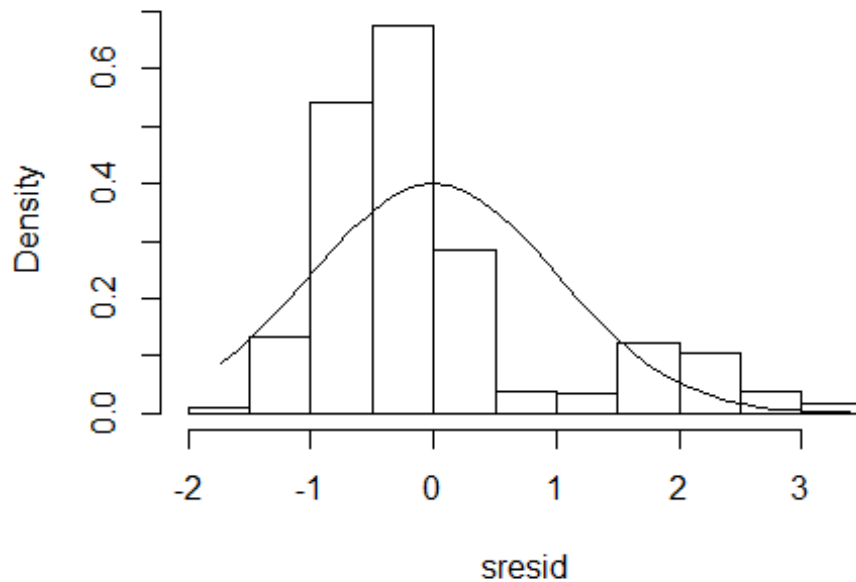

```
#Non-constant Error Variance
# Evaluate homoscedasticity
# non-constant error variance test
ncvTest(x)

## Non-constant Variance Score Test
## Variance formula: ~ fitted.values
## Chisquare = 263.4021, Df = 1, p = < 2.22e-16

# plot studentized residuals vs. fitted values
spreadLevelPlot(x)

## Warning in spreadLevelPlot.lm(x):
## 245 negative fitted values removed
```

Spread-Level Plot for X
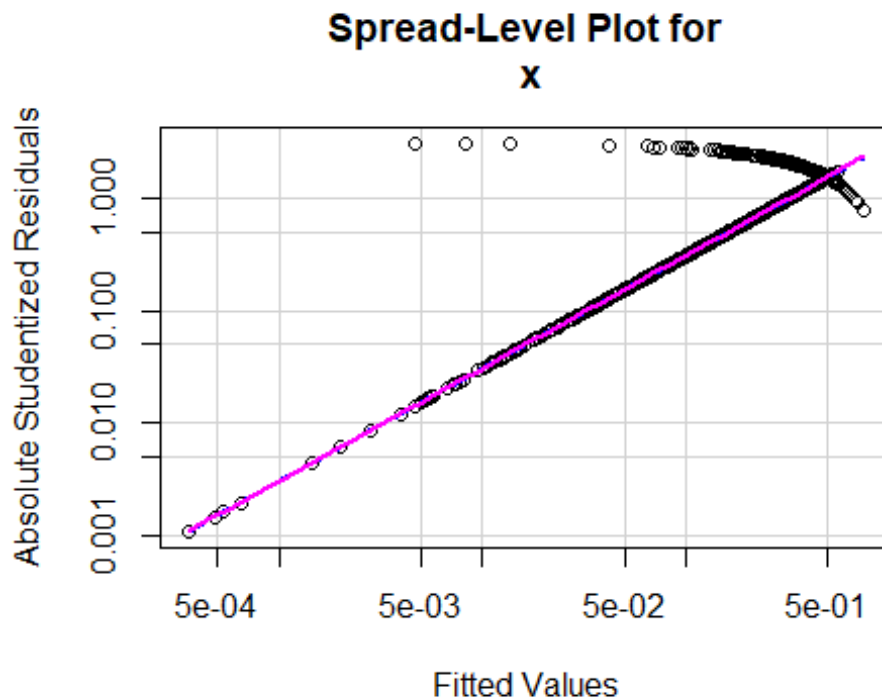
```
##
## Suggested power transformation:  -0.0006310025

#Non-independence of Errors
# Test for Autocorrelated Errors
durbinWatsonTest(x)

##  lag Autocorrelation D-W Statistic p-value
##    1      0.03902977        1.91893   0.128
##  Alternative hypothesis: rho != 0

summary(x)

##
## Call:
## lm(formula = Attrition ~ ï..Age + BusinessTravel + DailyRate +
##     DistanceFromHome + EnvironmentSatisfaction + MaritalStatus +
##     HourlyRate + JobInvolvement + JobLevel + JobSatisfaction +
##     MaritalStatus + MonthlyIncome + OverTime + PercentSalaryHike +
##     StandardHours + TotalWorkingYears + WorkLifeBalance + YearsAtCompany +
##     YearsInCurrentRole + YearsSinceLastPromotion + YearsWithCurrManager,
##     data = emp_churn)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -0.56216 -0.20840 -0.09171  0.05753  1.11567
##
```

```
## Coefficients: (1 not defined because of singularities)
##                                 Estimate Std. Error t value Pr(>|t|)
## (Intercept)                     8.341e-01  9.065e-02   9.201   < 2e-16 ***
## ï..Age                         -3.162e-03  1.326e-03  -2.384   0.01726 *
## BusinessTravelTravel_Frequently 1.514e-01  3.360e-02   4.505 7.18e-06 ***
## BusinessTravelTravel_Rarely     6.512e-02  2.904e-02   2.243   0.02507 *
## DailyRate                      -2.791e-05  2.154e-05  -1.295   0.19538
## DistanceFromHome                3.460e-03  1.068e-03   3.239   0.00123 **
## EnvironmentSatisfaction        -4.029e-02  7.927e-03  -5.083 4.20e-07 ***
## MaritalStatus1                 -1.102e-01  2.014e-02  -5.474 5.17e-08 ***
## MaritalStatus2                 -1.349e-01  2.399e-02  -5.622 2.26e-08 ***
## HourlyRate                     -2.170e-04  4.271e-04  -0.508   0.61150
## JobInvolvement                 -6.229e-02  1.220e-02  -5.107 3.71e-07 ***
## JobLevel                       -2.387e-02  2.604e-02  -0.917   0.35937
## JobSatisfaction                -4.033e-02  7.858e-03  -5.132 3.25e-07 ***
## MonthlyIncome                  -3.525e-07  6.016e-06  -0.059   0.95329
## OverTime1                       2.024e-01  1.924e-02  10.522   < 2e-16 ***
## PercentSalaryHike              -1.674e-03  2.365e-03  -0.708   0.47918
## StandardHours                         NA         NA      NA        NA
## TotalWorkingYears              -1.479e-03  2.358e-03  -0.627   0.53049
## WorkLifeBalance                -2.903e-02  1.227e-02  -2.365   0.01815 *
## YearsAtCompany                  2.603e-03  2.931e-03   0.888   0.37455
## YearsInCurrentRole             -9.064e-03  3.914e-03  -2.316   0.02070 *
## YearsSinceLastPromotion         1.187e-02  3.455e-03   3.435   0.00061 ***
## YearsWithCurrManager           -1.092e-02  4.019e-03  -2.718   0.00666 **
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.33 on 1448 degrees of freedom
## Multiple R-squared:  0.207,  Adjusted R-squared:  0.1955
## F-statistic:    18 on 21 and 1448 DF,  p-value: < 2.2e-16

x1 <- x
x2 <-
lm(Attrition~ï..Age+BusinessTravel+DailyRate+DistanceFromHome+EnvironmentSati
sfaction+MaritalStatus+HourlyRate+JobInvolvement+JobLevel+JobSatisfaction+Mar
italStatus+MonthlyIncome+OverTime+PercentSalaryHike+StandardHours+TotalWorkin
gYears+WorkLifeBalance+YearsAtCompany+YearsInCurrentRole+YearsSinceLastPromot
ion+YearsWithCurrManager, data=emp_churn)
# compare models
anova(x1, x2)

## Analysis of Variance Table
##
## Model 1: Attrition ~ ï..Age + BusinessTravel + DailyRate +
DistanceFromHome +
##      EnvironmentSatisfaction + MaritalStatus + HourlyRate + JobInvolvement
+
##      JobLevel + JobSatisfaction + MaritalStatus + MonthlyIncome +
##      OverTime + PercentSalaryHike + StandardHours + TotalWorkingYears +
```

```
##      WorkLifeBalance + YearsAtCompany + YearsInCurrentRole +
YearsSinceLastPromotion +
##      YearsWithCurrManager
## Model 2: Attrition ~ ï..Age + BusinessTravel + DailyRate +
DistanceFromHome +
##      EnvironmentSatisfaction + MaritalStatus + HourlyRate + JobInvolvement
+
##      JobLevel + JobSatisfaction + MaritalStatus + MonthlyIncome +
##      OverTime + PercentSalaryHike + StandardHours + TotalWorkingYears +
##      WorkLifeBalance + YearsAtCompany + YearsInCurrentRole +
YearsSinceLastPromotion +
##      YearsWithCurrManager
##   Res.Df    RSS Df Sum of Sq F Pr(>F)
## 1   1448 157.64
## 2   1448 157.64  0         0

step <- stepAIC(x, direction="both")

## Start:  AIC=-3238.05
## Attrition ~ ï..Age + BusinessTravel + DailyRate + DistanceFromHome +
##      EnvironmentSatisfaction + MaritalStatus + HourlyRate + JobInvolvement
+
##      JobLevel + JobSatisfaction + MaritalStatus + MonthlyIncome +
##      OverTime + PercentSalaryHike + StandardHours + TotalWorkingYears +
##      WorkLifeBalance + YearsAtCompany + YearsInCurrentRole +
YearsSinceLastPromotion +
##      YearsWithCurrManager
##
##
## Step:  AIC=-3238.05
## Attrition ~ ï..Age + BusinessTravel + DailyRate + DistanceFromHome +
##      EnvironmentSatisfaction + MaritalStatus + HourlyRate + JobInvolvement
+
##      JobLevel + JobSatisfaction + MonthlyIncome + OverTime +
PercentSalaryHike +
##      TotalWorkingYears + WorkLifeBalance + YearsAtCompany +
YearsInCurrentRole +
##      YearsSinceLastPromotion + YearsWithCurrManager
##
##                            Df Sum of Sq    RSS     AIC
## - MonthlyIncome             1    0.0004 157.64 -3240.0
## - HourlyRate                1    0.0281 157.67 -3239.8
## - TotalWorkingYears         1    0.0429 157.69 -3239.7
## - PercentSalaryHike         1    0.0545 157.70 -3239.5
## - YearsAtCompany            1    0.0859 157.73 -3239.3
## - JobLevel                  1    0.0915 157.73 -3239.2
## - DailyRate                 1    0.1827 157.82 -3238.3
## <none>                                   157.64 -3238.1
## - YearsInCurrentRole        1    0.5840 158.23 -3234.6
## - WorkLifeBalance           1    0.6091 158.25 -3234.4
```

```
## - ï..Age                       1      0.6187 158.26 -3234.3
## - YearsWithCurrManager         1      0.8040 158.45 -3232.6
## - DistanceFromHome             1      1.1421 158.78 -3229.4
## - YearsSinceLastPromotion      1      1.2843 158.93 -3228.1
## - BusinessTravel               2      2.5438 160.19 -3218.5
## - EnvironmentSatisfaction      1      2.8130 160.46 -3214.1
## - JobInvolvement               1      2.8392 160.48 -3213.8
## - JobSatisfaction              1      2.8675 160.51 -3213.6
## - MaritalStatus                2      4.4752 162.12 -3200.9
## - OverTime                     1     12.0529 169.69 -3131.7
##
## Step:  AIC=-3240.05
## Attrition ~ ï..Age + BusinessTravel + DailyRate + DistanceFromHome +
##      EnvironmentSatisfaction + MaritalStatus + HourlyRate + JobInvolvement
+
##      JobLevel + JobSatisfaction + OverTime + PercentSalaryHike +
##      TotalWorkingYears + WorkLifeBalance + YearsAtCompany +
YearsInCurrentRole +
##      YearsSinceLastPromotion + YearsWithCurrManager
##
##                            Df Sum of Sq    RSS     AIC
## - HourlyRate               1      0.0283 157.67 -3241.8
## - TotalWorkingYears        1      0.0452 157.69 -3241.6
## - PercentSalaryHike        1      0.0548 157.70 -3241.5
## - YearsAtCompany           1      0.0857 157.73 -3241.3
## - DailyRate                1      0.1829 157.83 -3240.3
## <none>                                    157.64 -3240.0
## + MonthlyIncome            1      0.0004 157.64 -3238.1
## - JobLevel                 1      0.4352 158.08 -3238.0
## - YearsInCurrentRole       1      0.5836 158.23 -3236.6
## - WorkLifeBalance          1      0.6089 158.25 -3236.4
## - ï..Age                   1      0.6189 158.26 -3236.3
## - YearsWithCurrManager     1      0.8061 158.45 -3234.6
## - DistanceFromHome         1      1.1514 158.79 -3231.4
## - YearsSinceLastPromotion  1      1.2843 158.93 -3230.1
## - BusinessTravel           2      2.5460 160.19 -3220.5
## - EnvironmentSatisfaction  1      2.8130 160.46 -3216.0
## - JobInvolvement           1      2.8389 160.48 -3215.8
## - JobSatisfaction          1      2.8671 160.51 -3215.6
## - MaritalStatus            2      4.4781 162.12 -3202.9
## - OverTime                 1     12.0536 169.70 -3133.7
##
## Step:  AIC=-3241.78
## Attrition ~ ï..Age + BusinessTravel + DailyRate + DistanceFromHome +
##      EnvironmentSatisfaction + MaritalStatus + JobInvolvement +
##      JobLevel + JobSatisfaction + OverTime + PercentSalaryHike +
##      TotalWorkingYears + WorkLifeBalance + YearsAtCompany +
YearsInCurrentRole +
##      YearsSinceLastPromotion + YearsWithCurrManager
##
```

```
##                                  Df Sum of Sq      RSS      AIC
## - TotalWorkingYears              1     0.0460 157.72 -3243.4
## - PercentSalaryHike              1     0.0538 157.72 -3243.3
## - YearsAtCompany                 1     0.0846 157.76 -3243.0
## - DailyRate                      1     0.1863 157.86 -3242.0
## <none>                                        157.67 -3241.8
## + HourlyRate                     1     0.0283 157.64 -3240.0
## - JobLevel                       1     0.4274 158.10 -3239.8
## + MonthlyIncome                  1     0.0006 157.67 -3239.8
## - YearsInCurrentRole             1     0.5808 158.25 -3238.4
## - WorkLifeBalance                1     0.6094 158.28 -3238.1
## - ï..Age                         1     0.6268 158.30 -3238.0
## - YearsWithCurrManager           1     0.8037 158.47 -3236.3
## - DistanceFromHome               1     1.1413 158.81 -3233.2
## - YearsSinceLastPromotion        1     1.2907 158.96 -3231.8
## - BusinessTravel                 2     2.5501 160.22 -3222.2
## - EnvironmentSatisfaction        1     2.7920 160.46 -3218.0
## - JobSatisfaction                1     2.8413 160.51 -3217.5
## - JobInvolvement                 1     2.8633 160.53 -3217.3
## - MaritalStatus                  2     4.4971 162.17 -3204.4
## - OverTime                       1    12.0607 169.73 -3135.4
##
## Step:  AIC=-3243.36
## Attrition ~ ï..Age + BusinessTravel + DailyRate + DistanceFromHome +
##     EnvironmentSatisfaction + MaritalStatus + JobInvolvement +
##     JobLevel + JobSatisfaction + OverTime + PercentSalaryHike +
##     WorkLifeBalance + YearsAtCompany + YearsInCurrentRole +
YearsSinceLastPromotion +
##     YearsWithCurrManager
##
##                                  Df Sum of Sq      RSS      AIC
## - PercentSalaryHike              1     0.0547 157.77 -3244.8
## - YearsAtCompany                 1     0.0585 157.78 -3244.8
## - DailyRate                      1     0.1946 157.91 -3243.5
## <none>                                        157.72 -3243.4
## + TotalWorkingYears              1     0.0460 157.67 -3241.8
## + HourlyRate                     1     0.0291 157.69 -3241.6
## + MonthlyIncome                  1     0.0033 157.71 -3241.4
## - YearsInCurrentRole             1     0.5794 158.30 -3240.0
## - WorkLifeBalance                1     0.6024 158.32 -3239.8
## - YearsWithCurrManager           1     0.8119 158.53 -3237.8
## - JobLevel                       1     0.9221 158.64 -3236.8
## - DistanceFromHome               1     1.1406 158.86 -3234.8
## - ï..Age                         1     1.1866 158.90 -3234.3
## - YearsSinceLastPromotion        1     1.2938 159.01 -3233.3
## - BusinessTravel                 2     2.5320 160.25 -3223.9
## - EnvironmentSatisfaction        1     2.7810 160.50 -3219.7
## - JobSatisfaction                1     2.8190 160.54 -3219.3
## - JobInvolvement                 1     2.8526 160.57 -3219.0
## - MaritalStatus                  2     4.4757 162.19 -3206.2
```

```
## - OverTime                       1    12.0455 169.76 -3137.2
##
## Step:  AIC=-3244.85
## Attrition ~ ï..Age + BusinessTravel + DailyRate + DistanceFromHome +
##      EnvironmentSatisfaction + MaritalStatus + JobInvolvement +
##      JobLevel + JobSatisfaction + OverTime + WorkLifeBalance +
##      YearsAtCompany + YearsInCurrentRole + YearsSinceLastPromotion +
##      YearsWithCurrManager
##
##                             Df Sum of Sq    RSS     AIC
## - YearsAtCompany             1     0.0633 157.84 -3246.3
## - DailyRate                  1     0.1990 157.97 -3245.0
## <none>                                    157.77 -3244.8
## + PercentSalaryHike          1     0.0547 157.72 -3243.4
## + TotalWorkingYears          1     0.0468 157.72 -3243.3
## + HourlyRate                 1     0.0281 157.74 -3243.1
## + MonthlyIncome              1     0.0039 157.77 -3242.9
## - YearsInCurrentRole         1     0.5919 158.36 -3241.3
## - WorkLifeBalance            1     0.6021 158.37 -3241.2
## - YearsWithCurrManager       1     0.8179 158.59 -3239.2
## - JobLevel                   1     0.9108 158.68 -3238.4
## - DistanceFromHome           1     1.1231 158.90 -3236.4
## - ï..Age                     1     1.2024 158.97 -3235.7
## - YearsSinceLastPromotion    1     1.2976 159.07 -3234.8
## - BusinessTravel             2     2.5492 160.32 -3225.3
## - EnvironmentSatisfaction    1     2.7590 160.53 -3221.4
## - JobSatisfaction            1     2.8345 160.61 -3220.7
## - JobInvolvement             1     2.8372 160.61 -3220.6
## - MaritalStatus              2     4.4707 162.24 -3207.8
## - OverTime                   1    12.0495 169.82 -3138.7
##
## Step:  AIC=-3246.26
## Attrition ~ ï..Age + BusinessTravel + DailyRate + DistanceFromHome +
##      EnvironmentSatisfaction + MaritalStatus + JobInvolvement +
##      JobLevel + JobSatisfaction + OverTime + WorkLifeBalance +
##      YearsInCurrentRole + YearsSinceLastPromotion + YearsWithCurrManager
##
##                             Df Sum of Sq    RSS     AIC
## - DailyRate                  1     0.2091 158.04 -3246.3
## <none>                                    157.84 -3246.3
## + YearsAtCompany             1     0.0633 157.77 -3244.8
## + PercentSalaryHike          1     0.0595 157.78 -3244.8
## + HourlyRate                 1     0.0269 157.81 -3244.5
## + TotalWorkingYears          1     0.0197 157.81 -3244.4
## + MonthlyIncome              1     0.0020 157.83 -3244.3
## - YearsInCurrentRole         1     0.5304 158.37 -3243.3
## - WorkLifeBalance            1     0.6129 158.45 -3242.6
## - YearsWithCurrManager       1     0.7876 158.62 -3240.9
## - JobLevel                   1     0.8484 158.68 -3240.4
## - DistanceFromHome           1     1.1179 158.95 -3237.9
```

```
## - ï..Age                       1     1.1753 159.01 -3237.4
## - YearsSinceLastPromotion   1     1.5859 159.42 -3233.6
## - BusinessTravel            2     2.5637 160.40 -3226.6
## - EnvironmentSatisfaction   1     2.7699 160.60 -3222.7
## - JobSatisfaction           1     2.8179 160.65 -3222.2
## - JobInvolvement            1     2.8918 160.73 -3221.6
## - MaritalStatus             2     4.4694 162.30 -3209.2
## - OverTime                  1    12.1073 169.94 -3139.6
##
## Step:  AIC=-3246.31
## Attrition ~ ï..Age + BusinessTravel + DistanceFromHome +
EnvironmentSatisfaction +
##      MaritalStatus + JobInvolvement + JobLevel + JobSatisfaction +
##      OverTime + WorkLifeBalance + YearsInCurrentRole +
YearsSinceLastPromotion +
##      YearsWithCurrManager
##
##                               Df Sum of Sq     RSS      AIC
## <none>                                      158.04 -3246.3
## + DailyRate                    1    0.2091 157.84 -3246.3
## + YearsAtCompany               1    0.0734 157.97 -3245.0
## + PercentSalaryHike            1    0.0645 157.98 -3244.9
## + HourlyRate                   1    0.0303 158.01 -3244.6
## + TotalWorkingYears            1    0.0237 158.02 -3244.5
## + MonthlyIncome                1    0.0027 158.04 -3244.3
## - YearsInCurrentRole           1    0.5623 158.61 -3243.1
## - WorkLifeBalance              1    0.5860 158.63 -3242.9
## - YearsWithCurrManager         1    0.7565 158.80 -3241.3
## - JobLevel                     1    0.8547 158.90 -3240.4
## - DistanceFromHome             1    1.1261 159.17 -3237.9
## - ï..Age                       1    1.1773 159.22 -3237.4
## - YearsSinceLastPromotion      1    1.6321 159.68 -3233.2
## - BusinessTravel               2    2.5843 160.63 -3226.5
## - EnvironmentSatisfaction      1    2.8001 160.84 -3222.5
## - JobSatisfaction              1    2.8672 160.91 -3221.9
## - JobInvolvement               1    2.9659 161.01 -3221.0
## - MaritalStatus                2    4.6344 162.68 -3207.8
## - OverTime                     1   12.0907 170.13 -3139.9

step$anova # display results

## Stepwise Model Path
## Analysis of Deviance Table
##
## Initial Model:
## Attrition ~ ï..Age + BusinessTravel + DailyRate + DistanceFromHome +
##      EnvironmentSatisfaction + MaritalStatus + HourlyRate + JobInvolvement
+
##      JobLevel + JobSatisfaction + MaritalStatus + MonthlyIncome +
##      OverTime + PercentSalaryHike + StandardHours + TotalWorkingYears +
```

```
##      WorkLifeBalance + YearsAtCompany + YearsInCurrentRole +
YearsSinceLastPromotion +
##      YearsWithCurrManager
##
## Final Model:
## Attrition ~ ï..Age + BusinessTravel + DistanceFromHome +
EnvironmentSatisfaction +
##      MaritalStatus + JobInvolvement + JobLevel + JobSatisfaction +
##      OverTime + WorkLifeBalance + YearsInCurrentRole +
YearsSinceLastPromotion +
##      YearsWithCurrManager
##
##
##                Step Df      Deviance Resid. Df Resid. Dev        AIC
## 1                                       1448    157.6424 -3238.052
## 2     - StandardHours  0 0.0000000000      1448    157.6424 -3238.052
## 3     - MonthlyIncome  1 0.0003737197      1449    157.6428 -3240.049
## 4        - HourlyRate  1 0.0283097887      1450    157.6711 -3241.785
## 5 - TotalWorkingYears  1 0.0459611747      1451    157.7170 -3243.356
## 6 - PercentSalaryHike  1 0.0546769330      1452    157.7717 -3244.847
## 7     - YearsAtCompany  1 0.0632856468      1453    157.8350 -3246.257
## 8         - DailyRate  1 0.2090976293      1454    158.0441 -3246.311
```

```r
#install.packages("leaps",
lib="/Library/Frameworks/R.framework/Versions/3.5/Resources/library")
library(leaps)
```

```
## Warning: package 'leaps' was built under R version 3.6.3
```

```r
leaps<-
regsubsets(Attrition~ï..Age+BusinessTravel+DailyRate+DistanceFromHome+Environ
mentSatisfaction+MaritalStatus+HourlyRate+JobInvolvement+JobLevel+JobSatisfac
tion+MaritalStatus+MonthlyIncome+OverTime+PercentSalaryHike+StandardHours+Tot
alWorkingYears+WorkLifeBalance+YearsAtCompany+YearsInCurrentRole+YearsSinceLa
stPromotion+YearsWithCurrManager, data=emp_churn,nbest=10)
```

```
## Warning in leaps.setup(x, y, wt = wt, nbest = nbest, nvmax = nvmax,
force.in =
## force.in, : 1 linear dependencies found
```

```
## Reordering variables and trying again:
```

```r
# view results
summary(leaps)
```

```
## Subset selection object
## Call: regsubsets.formula(Attrition ~ ï..Age + BusinessTravel + DailyRate +
##      DistanceFromHome + EnvironmentSatisfaction + MaritalStatus +
##      HourlyRate + JobInvolvement + JobLevel + JobSatisfaction +
##      MaritalStatus + MonthlyIncome + OverTime + PercentSalaryHike +
##      StandardHours + TotalWorkingYears + WorkLifeBalance + YearsAtCompany +
```

```
##     YearsInCurrentRole + YearsSinceLastPromotion + YearsWithCurrManager,
##     data = emp_churn, nbest = 10)
## 22 Variables  (and intercept)
##                                    Forced in Forced out
## ï..Age                              FALSE      FALSE
## BusinessTravelTravel_Frequently     FALSE      FALSE
## BusinessTravelTravel_Rarely         FALSE      FALSE
## DailyRate                           FALSE      FALSE
## DistanceFromHome                    FALSE      FALSE
## EnvironmentSatisfaction             FALSE      FALSE
## MaritalStatus1                      FALSE      FALSE
## MaritalStatus2                      FALSE      FALSE
## HourlyRate                          FALSE      FALSE
## JobInvolvement                      FALSE      FALSE
## JobLevel                            FALSE      FALSE
## JobSatisfaction                     FALSE      FALSE
## MonthlyIncome                       FALSE      FALSE
## OverTime1                           FALSE      FALSE
## PercentSalaryHike                   FALSE      FALSE
## TotalWorkingYears                   FALSE      FALSE
## WorkLifeBalance                     FALSE      FALSE
## YearsAtCompany                      FALSE      FALSE
## YearsInCurrentRole                  FALSE      FALSE
## YearsSinceLastPromotion             FALSE      FALSE
## YearsWithCurrManager                FALSE      FALSE
## StandardHours                       FALSE      FALSE
## 10 subsets of each size up to 9
## Selection Algorithm: exhaustive
##           ï..Age BusinessTravelTravel_Frequently
BusinessTravelTravel_Rarely
## 1  ( 1 )   " "      " "                                  " "
## 1  ( 2 )   " "      " "                                  " "
## 1  ( 3 )   " "      " "                                  " "
## 1  ( 4 )   " "      " "                                  " "
## 1  ( 5 )   " "      " "                                  " "
## 1  ( 6 )   "*"      " "                                  " "
## 1  ( 7 )   " "      " "                                  " "
## 1  ( 8 )   " "      " "                                  " "
## 1  ( 9 )   " "      " "                                  " "
## 1  ( 10 )  " "      "*"                                  " "
## 2  ( 1 )   " "      " "                                  " "
## 2  ( 2 )   " "      " "                                  " "
## 2  ( 3 )   "*"      " "                                  " "
## 2  ( 4 )   " "      " "                                  " "
## 2  ( 5 )   " "      " "                                  " "
## 2  ( 6 )   " "      " "                                  " "
## 2  ( 7 )   " "      " "                                  " "
## 2  ( 8 )   " "      " "                                  " "
## 2  ( 9 )   " "      " "                                  " "
## 2  ( 10 )  " "      " "                                  " "
```

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## 3  ( 1  )   " "      " "                                    " "
## 3  ( 2  )   " "      " "                                    " "
## 3  ( 3  )   " "      " "                                    " "
## 3  ( 4  )   " "      " "                                    " "
## 3  ( 5  )   " "      " "                                    " "
## 3  ( 6  )   " "      " "                                    " "
## 3  ( 7  )   "*"      " "                                    " "
## 3  ( 8  )   "*"      " "                                    " "
## 3  ( 9  )   "*"      " "                                    " "
## 3  ( 10 )   " "      "*"                                    " "
## 4  ( 1  )   " "      " "                                    " "
## 4  ( 2  )   " "      " "                                    " "
## 4  ( 3  )   " "      " "                                    " "
## 4  ( 4  )   " "      "*"                                    " "
## 4  ( 5  )   " "      " "                                    " "
## 4  ( 6  )   " "      " "                                    " "
## 4  ( 7  )   " "      " "                                    " "
## 4  ( 8  )   "*"      " "                                    " "
## 4  ( 9  )   " "      " "                                    " "
## 4  ( 10 )   "*"      " "                                    " "
## 5  ( 1  )   " "      " "                                    " "
## 5  ( 2  )   " "      " "                                    " "
## 5  ( 3  )   " "      "*"                                    " "
## 5  ( 4  )   " "      "*"                                    " "
## 5  ( 5  )   " "      " "                                    " "
## 5  ( 6  )   " "      " "                                    " "
## 5  ( 7  )   " "      " "                                    " "
## 5  ( 8  )   "*"      " "                                    " "
## 5  ( 9  )   " "      " "                                    " "
## 5  ( 10 )   " "      "*"                                    " "
## 6  ( 1  )   " "      " "                                    " "
## 6  ( 2  )   " "      "*"                                    " "
## 6  ( 3  )   " "      " "                                    " "
## 6  ( 4  )   " "      " "                                    " "
## 6  ( 5  )   " "      " "                                    " "
## 6  ( 6  )   " "      " "                                    " "
## 6  ( 7  )   " "      "*"                                    " "
## 6  ( 8  )   "*"      " "                                    " "
## 6  ( 9  )   " "      " "                                    " "
## 6  ( 10 )   " "      " "                                    " "
## 7  ( 1  )   " "      " "                                    " "
## 7  ( 2  )   " "      " "                                    " "
## 7  ( 3  )   " "      " "                                    " "
## 7  ( 4  )   " "      "*"                                    " "
## 7  ( 5  )   " "      "*"                                    " "
## 7  ( 6  )   " "      "*"                                    " "
## 7  ( 7  )   " "      "*"                                    " "
## 7  ( 8  )   "*"      " "                                    " "
## 7  ( 9  )   "*"      "*"                                    " "
## 7  ( 10 )   " "      "*"                                    " "
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## 8  ( 1 )  " "    "*"                                        " "
## 8  ( 2 )  " "    "*"                                        " "
## 8  ( 3 )  "*"    " "                                        " "
## 8  ( 4 )  " "    "*"                                        " "
## 8  ( 5 )  "*"    " "                                        " "
## 8  ( 6 )  " "    " "                                        " "
## 8  ( 7 )  " "    " "                                        " "
## 8  ( 8 )  " "    " "                                        " "
## 8  ( 9 )  " "    " "                                        " "
## 8  ( 10 ) " "    " "                                        " "
## 9  ( 1 )  "*"    "*"                                        " "
## 9  ( 2 )  "*"    "*"                                        " "
## 9  ( 3 )  " "    "*"                                        " "
## 9  ( 4 )  " "    "*"                                        " "
## 9  ( 5 )  " "    "*"                                        " "
## 9  ( 6 )  " "    "*"                                        " "
## 9  ( 7 )  " "    "*"                                        " "
## 9  ( 8 )  " "    "*"                                        " "
## 9  ( 9 )  " "    "*"                                        " "
## 9  ( 10 ) " "    "*"                                        " "
##           DailyRate DistanceFromHome EnvironmentSatisfaction
MaritalStatus1
## 1  ( 1 )  " "       " "              " "                     " "
## 1  ( 2 )  " "       " "              " "                     " "
## 1  ( 3 )  " "       " "              " "                     " "
## 1  ( 4 )  " "       " "              " "                     " "
## 1  ( 5 )  " "       " "              " "                     " "
## 1  ( 6 )  " "       " "              " "                     " "
## 1  ( 7 )  " "       " "              " "                     " "
## 1  ( 8 )  " "       " "              " "                     " "
## 1  ( 9 )  " "       " "              " "                     " "
## 1  ( 10 ) " "       " "              " "                     " "
## 2  ( 1 )  " "       " "              " "                     " "
## 2  ( 2 )  " "       " "              " "                     " "
## 2  ( 3 )  " "       " "              " "                     " "
## 2  ( 4 )  " "       " "              " "                     " "
## 2  ( 5 )  " "       " "              " "                     " "
## 2  ( 6 )  " "       " "              " "                     " "
## 2  ( 7 )  " "       " "              " "                     " "
## 2  ( 8 )  " "       " "              " "                     " "
## 2  ( 9 )  " "       " "              "*"                     " "
## 2  ( 10 ) " "       " "              " "                     " "
## 3  ( 1 )  " "       " "              " "                     " "
## 3  ( 2 )  " "       " "              " "                     " "
## 3  ( 3 )  " "       " "              "*"                     " "
## 3  ( 4 )  " "       " "              " "                     " "
## 3  ( 5 )  " "       " "              "*"                     " "
## 3  ( 6 )  " "       " "              " "                     " "
## 3  ( 7 )  " "       " "              " "                     " "
## 3  ( 8 )  " "       " "              " "                     " "
```

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## 3  ( 9  )  " "      " "          "*"              " "
## 3  ( 10 )  " "      " "          " "              " "
## 4  ( 1  )  " "      " "          "*"              " "
## 4  ( 2  )  " "      " "          " "              " "
## 4  ( 3  )  " "      " "          "*"              " "
## 4  ( 4  )  " "      " "          " "              " "
## 4  ( 5  )  " "      " "          " "              " "
## 4  ( 6  )  " "      " "          "*"              " "
## 4  ( 7  )  " "      " "          "*"              " "
## 4  ( 8  )  " "      " "          "*"              " "
## 4  ( 9  )  " "      " "          " "              "*"
## 4  ( 10 )  " "      " "          " "              " "
## 5  ( 1  )  " "      " "          "*"              " "
## 5  ( 2  )  " "      " "          "*"              " "
## 5  ( 3  )  " "      " "          "*"              " "
## 5  ( 4  )  " "      " "          " "              " "
## 5  ( 5  )  " "      " "          " "              "*"
## 5  ( 6  )  " "      " "          "*"              "*"
## 5  ( 7  )  " "      " "          "*"              " "
## 5  ( 8  )  " "      " "          "*"              " "
## 5  ( 9  )  " "      " "          " "              "*"
## 5  ( 10 )  " "      " "          "*"              " "
## 6  ( 1  )  " "      " "          "*"              "*"
## 6  ( 2  )  " "      " "          "*"              " "
## 6  ( 3  )  " "      " "          " "              "*"
## 6  ( 4  )  " "      " "          "*"              "*"
## 6  ( 5  )  " "      " "          "*"              "*"
## 6  ( 6  )  " "      " "          " "              "*"
## 6  ( 7  )  " "      " "          "*"              " "
## 6  ( 8  )  " "      " "          "*"              " "
## 6  ( 9  )  " "      " "          "*"              "*"
## 6  ( 10 )  " "      " "          "*"              "*"
## 7  ( 1  )  " "      " "          "*"              "*"
## 7  ( 2  )  " "      " "          "*"              "*"
## 7  ( 3  )  " "      " "          "*"              "*"
## 7  ( 4  )  " "      " "          " "              "*"
## 7  ( 5  )  " "      " "          "*"              "*"
## 7  ( 6  )  " "      " "          "*"              "*"
## 7  ( 7  )  " "      " "          "*"              "*"
## 7  ( 8  )  " "      " "          "*"              "*"
## 7  ( 9  )  " "      " "          "*"              " "
## 7  ( 10 )  " "      " "          " "              "*"
## 8  ( 1  )  " "      " "          "*"              "*"
## 8  ( 2  )  " "      " "          "*"              "*"
## 8  ( 3  )  " "      " "          "*"              "*"
## 8  ( 4  )  " "      " "          "*"              "*"
## 8  ( 5  )  " "      " "          "*"              "*"
## 8  ( 6  )  " "      "*"          "*"              "*"
## 8  ( 7  )  " "      " "          "*"              "*"
## 8  ( 8  )  " "      " "          "*"              "*"
```

```
## 8  ( 9 )  " "      " "          "*"          "*"
## 8  ( 10 ) " "      " "          "*"          "*"
## 9  ( 1 )  " "      " "          "*"          "*"
## 9  ( 2 )  " "      " "          "*"          "*"
## 9  ( 3 )  " "      "*"          "*"          "*"
## 9  ( 4 )  " "      " "          "*"          "*"
## 9  ( 5 )  " "      " "          "*"          "*"
## 9  ( 6 )  " "      " "          "*"          "*"
## 9  ( 7 )  " "      " "          "*"          "*"
## 9  ( 8 )  " "      " "          "*"          "*"
## 9  ( 9 )  " "      " "          "*"          "*"
## 9  ( 10 ) " "      " "          "*"          "*"
##          MaritalStatus2 HourlyRate JobInvolvement JobLevel
## JobSatisfaction
## 1  ( 1 )  " "            " "        " "            " "      " "
## 1  ( 2 )  " "            " "        " "            " "      " "
## 1  ( 3 )  " "            " "        " "            "*"      " "
## 1  ( 4 )  " "            " "        " "            " "      " "
## 1  ( 5 )  " "            " "        " "            " "      " "
## 1  ( 6 )  " "            " "        " "            " "      " "
## 1  ( 7 )  " "            " "        " "            " "      " "
## 1  ( 8 )  " "            " "        " "            " "      " "
## 1  ( 9 )  " "            " "        "*"            " "      " "
## 1  ( 10 ) " "            " "        " "            " "      " "
## 2  ( 1 )  " "            " "        " "            " "      " "
## 2  ( 2 )  " "            " "        " "            "*"      " "
## 2  ( 3 )  " "            " "        " "            " "      " "
## 2  ( 4 )  " "            " "        " "            " "      " "
## 2  ( 5 )  " "            " "        " "            " "      " "
## 2  ( 6 )  " "            " "        " "            " "      " "
## 2  ( 7 )  " "            " "        " "            " "      " "
## 2  ( 8 )  " "            " "        "*"            " "      " "
## 2  ( 9 )  " "            " "        " "            " "      " "
## 2  ( 10 ) " "            " "        " "            " "      "*"
## 3  ( 1 )  " "            " "        "*"            " "      " "
## 3  ( 2 )  " "            " "        "*"            "*"      " "
## 3  ( 3 )  " "            " "        " "            " "      " "
## 3  ( 4 )  " "            " "        "*"            " "      " "
## 3  ( 5 )  " "            " "        " "            "*"      " "
## 3  ( 6 )  " "            " "        " "            " "      "*"
## 3  ( 7 )  " "            " "        "*"            " "      " "
## 3  ( 8 )  " "            " "        " "            " "      " "
## 3  ( 9 )  " "            " "        " "            " "      " "
## 3  ( 10 ) " "            " "        " "            " "      " "
## 4  ( 1 )  " "            " "        "*"            " "      " "
## 4  ( 2 )  " "            " "        "*"            " "      "*"
## 4  ( 3 )  " "            " "        "*"            "*"      " "
## 4  ( 4 )  " "            " "        "*"            " "      " "
## 4  ( 5 )  " "            " "        "*"            "*"      "*"
## 4  ( 6 )  " "            " "        "*"            " "      " "
```

```
## 4  ( 7  )  " "        " "        " "        " "        "*"
## 4  ( 8  )  " "        " "        "*"        " "        " "
## 4  ( 9  )  "*"        " "        " "        " "        " "
## 4  ( 10 )  " "        " "        "*"        " "        " "
## 5  ( 1  )  " "        " "        "*"        " "        "*"
## 5  ( 2  )  " "        " "        "*"        "*"        "*"
## 5  ( 3  )  " "        " "        "*"        " "        " "
## 5  ( 4  )  " "        " "        "*"        " "        "*"
## 5  ( 5  )  "*"        " "        "*"        " "        " "
## 5  ( 6  )  "*"        " "        " "        " "        " "
## 5  ( 7  )  " "        " "        "*"        " "        "*"
## 5  ( 8  )  " "        " "        "*"        " "        " "
## 5  ( 9  )  "*"        " "        "*"        "*"        " "
## 5  ( 10 )  " "        " "        "*"        "*"        " "
## 6  ( 1  )  "*"        " "        "*"        " "        " "
## 6  ( 2  )  " "        " "        "*"        " "        "*"
## 6  ( 3  )  "*"        " "        "*"        " "        "*"
## 6  ( 4  )  "*"        " "        " "        " "        "*"
## 6  ( 5  )  "*"        " "        "*"        "*"        " "
## 6  ( 6  )  "*"        " "        "*"        "*"        "*"
## 6  ( 7  )  " "        " "        "*"        "*"        "*"
## 6  ( 8  )  " "        " "        "*"        " "        "*"
## 6  ( 9  )  "*"        " "        "*"        " "        " "
## 6  ( 10 )  "*"        " "        " "        "*"        "*"
## 7  ( 1  )  "*"        " "        "*"        " "        "*"
## 7  ( 2  )  "*"        " "        "*"        "*"        "*"
## 7  ( 3  )  "*"        " "        "*"        " "        "*"
## 7  ( 4  )  "*"        " "        "*"        " "        "*"
## 7  ( 5  )  "*"        " "        "*"        " "        " "
## 7  ( 6  )  "*"        " "        " "        " "        "*"
## 7  ( 7  )  "*"        " "        "*"        "*"        " "
## 7  ( 8  )  "*"        " "        "*"        " "        "*"
## 7  ( 9  )  " "        " "        "*"        " "        "*"
## 7  ( 10 )  "*"        " "        "*"        "*"        "*"
## 8  ( 1  )  "*"        " "        "*"        " "        "*"
## 8  ( 2  )  "*"        " "        "*"        "*"        "*"
## 8  ( 3  )  "*"        " "        "*"        " "        "*"
## 8  ( 4  )  "*"        " "        "*"        " "        "*"
## 8  ( 5  )  "*"        " "        "*"        " "        "*"
## 8  ( 6  )  "*"        " "        "*"        " "        "*"
## 8  ( 7  )  "*"        " "        "*"        "*"        "*"
## 8  ( 8  )  "*"        " "        "*"        " "        "*"
## 8  ( 9  )  "*"        " "        "*"        " "        "*"
## 8  ( 10 )  "*"        " "        "*"        "*"        "*"
## 9  ( 1  )  "*"        " "        "*"        " "        "*"
## 9  ( 2  )  "*"        " "        "*"        " "        "*"
## 9  ( 3  )  "*"        " "        "*"        " "        "*"
## 9  ( 4  )  "*"        " "        "*"        " "        "*"
## 9  ( 5  )  "*"        " "        "*"        "*"        "*"
## 9  ( 6  )  "*"        " "        "*"        " "        "*"
```

```
## 9  ( 7 )  "*"              " "          "*"            "*"         "*"
## 9  ( 8 )  "*"              " "          "*"            " "         "*"
## 9  ( 9 )  "*"              " "          "*"            " "         "*"
## 9  ( 10 ) "*"              " "          "*"            " "         "*"
##            MonthlyIncome OverTime1 PercentSalaryHike StandardHours
## 1  ( 1 )  " "            "*"       " "               " "
## 1  ( 2 )  " "            " "       " "               " "
## 1  ( 3 )  " "            " "       " "               " "
## 1  ( 4 )  " "            " "       " "               " "
## 1  ( 5 )  "*"            " "       " "               " "
## 1  ( 6 )  " "            " "       " "               " "
## 1  ( 7 )  " "            " "       " "               " "
## 1  ( 8 )  " "            " "       " "               " "
## 1  ( 9 )  " "            " "       " "               " "
## 1  ( 10 ) " "            " "       " "               " "
## 2  ( 1 )  " "            "*"       " "               " "
## 2  ( 2 )  " "            "*"       " "               " "
## 2  ( 3 )  " "            "*"       " "               " "
## 2  ( 4 )  "*"            "*"       " "               " "
## 2  ( 5 )  " "            "*"       " "               " "
## 2  ( 6 )  " "            "*"       " "               " "
## 2  ( 7 )  " "            "*"       " "               " "
## 2  ( 8 )  " "            "*"       " "               " "
## 2  ( 9 )  " "            "*"       " "               " "
## 2  ( 10 ) " "            "*"       " "               " "
## 3  ( 1 )  " "            "*"       " "               " "
## 3  ( 2 )  " "            "*"       " "               " "
## 3  ( 3 )  " "            "*"       " "               " "
## 3  ( 4 )  "*"            "*"       " "               " "
## 3  ( 5 )  " "            "*"       " "               " "
## 3  ( 6 )  " "            "*"       " "               " "
## 3  ( 7 )  " "            "*"       " "               " "
## 3  ( 8 )  " "            "*"       " "               " "
## 3  ( 9 )  " "            "*"       " "               " "
## 3  ( 10 ) " "            "*"       " "               " "
## 4  ( 1 )  " "            "*"       " "               " "
## 4  ( 2 )  " "            "*"       " "               " "
## 4  ( 3 )  " "            "*"       " "               " "
## 4  ( 4 )  " "            "*"       " "               " "
## 4  ( 5 )  " "            "*"       " "               " "
## 4  ( 6 )  "*"            "*"       " "               " "
## 4  ( 7 )  " "            "*"       " "               " "
## 4  ( 8 )  " "            "*"       " "               " "
## 4  ( 9 )  " "            "*"       " "               " "
## 4  ( 10 ) " "            "*"       " "               " "
## 5  ( 1 )  " "            "*"       " "               " "
## 5  ( 2 )  " "            "*"       " "               " "
## 5  ( 3 )  " "            "*"       " "               " "
## 5  ( 4 )  " "            "*"       " "               " "
## 5  ( 5 )  " "            "*"       " "               " "
```

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## 5  ( 6 )   " "            "*"         " "                  " "
## 5  ( 7 )   "*"            "*"         " "                  " "
## 5  ( 8 )   " "            "*"         " "                  " "
## 5  ( 9 )   " "            "*"         " "                  " "
## 5  ( 10 )  " "            "*"         " "                  " "
## 6  ( 1 )   " "            "*"         " "                  " "
## 6  ( 2 )   " "            "*"         " "                  " "
## 6  ( 3 )   " "            "*"         " "                  " "
## 6  ( 4 )   " "            "*"         " "                  " "
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## 6  ( 7 )   " "            "*"         " "                  " "
## 6  ( 8 )   " "            "*"         " "                  " "
## 6  ( 9 )   "*"            "*"         " "                  " "
## 6  ( 10 )  " "            "*"         " "                  " "
## 7  ( 1 )   " "            "*"         " "                  " "
## 7  ( 2 )   " "            "*"         " "                  " "
## 7  ( 3 )   "*"            "*"         " "                  " "
## 7  ( 4 )   " "            "*"         " "                  " "
## 7  ( 5 )   " "            "*"         " "                  " "
## 7  ( 6 )   " "            "*"         " "                  " "
## 7  ( 7 )   " "            "*"         " "                  " "
## 7  ( 8 )   " "            "*"         " "                  " "
## 7  ( 9 )   " "            "*"         " "                  " "
## 7  ( 10 )  " "            "*"         " "                  " "
## 8  ( 1 )   " "            "*"         " "                  " "
## 8  ( 2 )   " "            "*"         " "                  " "
## 8  ( 3 )   " "            "*"         " "                  " "
## 8  ( 4 )   "*"            "*"         " "                  " "
## 8  ( 5 )   " "            "*"         " "                  " "
## 8  ( 6 )   " "            "*"         " "                  " "
## 8  ( 7 )   " "            "*"         " "                  " "
## 8  ( 8 )   " "            "*"         " "                  " "
## 8  ( 9 )   " "            "*"         " "                  " "
## 8  ( 10 )  " "            "*"         " "                  " "
## 9  ( 1 )   " "            "*"         " "                  " "
## 9  ( 2 )   " "            "*"         " "                  " "
## 9  ( 3 )   " "            "*"         " "                  " "
## 9  ( 4 )   " "            "*"         " "                  " "
## 9  ( 5 )   " "            "*"         " "                  " "
## 9  ( 6 )   " "            "*"         " "                  " "
## 9  ( 7 )   " "            "*"         " "                  " "
## 9  ( 8 )   "*"            "*"         " "                  " "
## 9  ( 9 )   " "            "*"         " "                  " "
## 9  ( 10 )  "*"            "*"         " "                  " "
##            TotalWorkingYears WorkLifeBalance YearsAtCompany
YearsInCurrentRole
## 1  ( 1 )   " "                " "             " "             " "
## 1  ( 2 )   "*"                " "             " "             " "
## 1  ( 3 )   " "                " "             " "             " "
```

```
## 1  ( 4  ) " "          " "          " "          "*"
## 1  ( 5  ) " "          " "          " "          " "
## 1  ( 6  ) " "          " "          " "          " "
## 1  ( 7  ) " "          " "          " "          " "
## 1  ( 8  ) " "          " "          "*"          " "
## 1  ( 9  ) " "          " "          " "          " "
## 1  ( 10 ) " "          " "          " "          " "
## 2  ( 1  ) "*"          " "          " "          " "
## 2  ( 2  ) " "          " "          " "          " "
## 2  ( 3  ) " "          " "          " "          " "
## 2  ( 4  ) " "          " "          " "          " "
## 2  ( 5  ) " "          " "          " "          "*"
## 2  ( 6  ) " "          " "          " "          " "
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## 2  ( 8  ) " "          " "          " "          " "
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## 2  ( 10 ) " "          " "          " "          " "
## 3  ( 1  ) "*"          " "          " "          " "
## 3  ( 2  ) " "          " "          " "          " "
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## 3  ( 6  ) "*"          " "          " "          " "
## 3  ( 7  ) " "          " "          " "          " "
## 3  ( 8  ) " "          " "          " "          "*"
## 3  ( 9  ) " "          " "          " "          " "
## 3  ( 10 ) "*"          " "          " "          " "
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## 4  ( 3  ) " "          " "          " "          " "
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## 4  ( 6  ) " "          " "          " "          " "
## 4  ( 7  ) "*"          " "          " "          " "
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## 4  ( 9  ) "*"          " "          " "          " "
## 4  ( 10 ) " "          " "          " "          "*"
## 5  ( 1  ) "*"          " "          " "          " "
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## 6  ( 3  ) "*"          " "          " "          " "
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## 8  ( 7  )  " "                  " "                " "                " "
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## 9  ( 10 )  " "                  " "                " "                "*"
##            YearsSinceLastPromotion YearsWithCurrManager
## 1  ( 1  )  " "                     " "
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## 1  ( 3  )  " "                     " "
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## 7  ( 9 )   " "                          " "
## 7  ( 10 )  " "                          " "
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## 8  ( 4 )   " "                          " "
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## 8  ( 6 )   " "                          " "
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## 8  ( 9 )   " "                          " "
## 8  ( 10 )  " "                          " "
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## 9  ( 6 )   " "                          " "
## 9  ( 7 )   " "                          " "
## 9  ( 8 )   " "                          "*"
## 9  ( 9 )   " "                          " "
## 9  ( 10 )  " "                          " "

# plot a table of models showing variables in each model.
# models are ordered by the selection statistic.
plot(leaps)
```
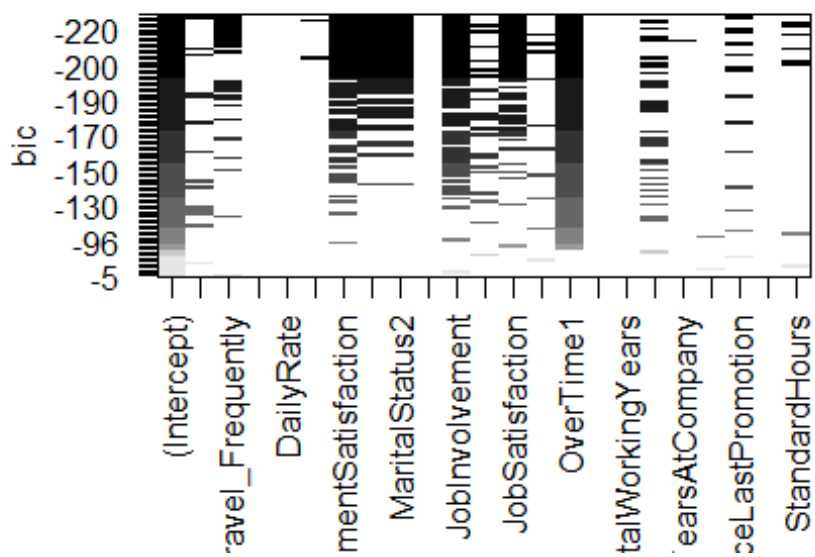
```
plot(leaps,scale="r2")
```
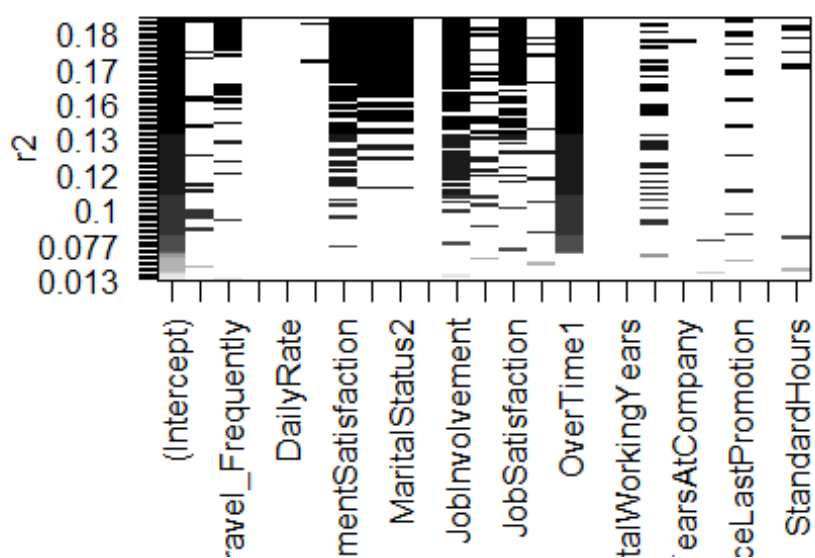
```
# All Subsets Regression
plot(leaps,scale="bic")
```



```
summary(leaps)

## Subset selection object
## Call: regsubsets.formula(Attrition ~ ï..Age + BusinessTravel + DailyRate +
##      DistanceFromHome + EnvironmentSatisfaction + MaritalStatus +
##      HourlyRate + JobInvolvement + JobLevel + JobSatisfaction +
##      MaritalStatus + MonthlyIncome + OverTime + PercentSalaryHike +
##      StandardHours + TotalWorkingYears + WorkLifeBalance + YearsAtCompany +
##      YearsInCurrentRole + YearsSinceLastPromotion + YearsWithCurrManager,
##      data = emp_churn, nbest = 10)
## 22 Variables  (and intercept)
##                                Forced in Forced out
## ï..Age                            FALSE      FALSE
## BusinessTravelTravel_Frequently   FALSE      FALSE
## BusinessTravelTravel_Rarely       FALSE      FALSE
## DailyRate                         FALSE      FALSE
## DistanceFromHome                  FALSE      FALSE
## EnvironmentSatisfaction           FALSE      FALSE
## MaritalStatus1                    FALSE      FALSE
## MaritalStatus2                    FALSE      FALSE
## HourlyRate                        FALSE      FALSE
## JobInvolvement                    FALSE      FALSE
## JobLevel                          FALSE      FALSE
## JobSatisfaction                   FALSE      FALSE
```

```
## MonthlyIncome                         FALSE    FALSE
## OverTime1                              FALSE    FALSE
## PercentSalaryHike                      FALSE    FALSE
## TotalWorkingYears                      FALSE    FALSE
## WorkLifeBalance                        FALSE    FALSE
## YearsAtCompany                         FALSE    FALSE
## YearsInCurrentRole                     FALSE    FALSE
## YearsSinceLastPromotion                FALSE    FALSE
## YearsWithCurrManager                   FALSE    FALSE
## StandardHours                          FALSE    FALSE
## 10 subsets of each size up to 9
## Selection Algorithm: exhaustive
##              ï..Age BusinessTravelTravel_Frequently
BusinessTravelTravel_Rarely
## 1  ( 1 )   " "     " "                              " "
## 1  ( 2 )   " "     " "                              " "
## 1  ( 3 )   " "     " "                              " "
## 1  ( 4 )   " "     " "                              " "
## 1  ( 5 )   " "     " "                              " "
## 1  ( 6 )   "*"     " "                              " "
## 1  ( 7 )   " "     " "                              " "
## 1  ( 8 )   " "     " "                              " "
## 1  ( 9 )   " "     " "                              " "
## 1  ( 10 )  " "     "*"                              " "
## 2  ( 1 )   " "     " "                              " "
## 2  ( 2 )   " "     " "                              " "
## 2  ( 3 )   "*"     " "                              " "
## 2  ( 4 )   " "     " "                              " "
## 2  ( 5 )   " "     " "                              " "
## 2  ( 6 )   " "     " "                              " "
## 2  ( 7 )   " "     " "                              " "
## 2  ( 8 )   " "     " "                              " "
## 2  ( 9 )   " "     " "                              " "
## 2  ( 10 )  " "     " "                              " "
## 3  ( 1 )   " "     " "                              " "
## 3  ( 2 )   " "     " "                              " "
## 3  ( 3 )   " "     " "                              " "
## 3  ( 4 )   " "     " "                              " "
## 3  ( 5 )   " "     " "                              " "
## 3  ( 6 )   " "     " "                              " "
## 3  ( 7 )   "*"     " "                              " "
## 3  ( 8 )   "*"     " "                              " "
## 3  ( 9 )   "*"     " "                              " "
## 3  ( 10 )  " "     "*"                              " "
## 4  ( 1 )   " "     " "                              " "
## 4  ( 2 )   " "     " "                              " "
## 4  ( 3 )   " "     " "                              " "
## 4  ( 4 )   " "     "*"                              " "
## 4  ( 5 )   " "     " "                              " "
## 4  ( 6 )   " "     " "                              " "
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## 4  ( 7 )   " "      " "                                          " "
## 4  ( 8 )   "*"      " "                                          " "
## 4  ( 9 )   " "      " "                                          " "
## 4  ( 10 )  "*"      " "                                          " "
## 5  ( 1 )   " "      " "                                          " "
## 5  ( 2 )   " "      " "                                          " "
## 5  ( 3 )   " "      "*"                                          " "
## 5  ( 4 )   " "      "*"                                          " "
## 5  ( 5 )   " "      " "                                          " "
## 5  ( 6 )   " "      " "                                          " "
## 5  ( 7 )   " "      " "                                          " "
## 5  ( 8 )   "*"      " "                                          " "
## 5  ( 9 )   " "      " "                                          " "
## 5  ( 10 )  " "      "*"                                          " "
## 6  ( 1 )   " "      " "                                          " "
## 6  ( 2 )   " "      "*"                                          " "
## 6  ( 3 )   " "      " "                                          " "
## 6  ( 4 )   " "      " "                                          " "
## 6  ( 5 )   " "      " "                                          " "
## 6  ( 6 )   " "      " "                                          " "
## 6  ( 7 )   " "      "*"                                          " "
## 6  ( 8 )   "*"      " "                                          " "
## 6  ( 9 )   " "      " "                                          " "
## 6  ( 10 )  " "      " "                                          " "
## 7  ( 1 )   " "      " "                                          " "
## 7  ( 2 )   " "      " "                                          " "
## 7  ( 3 )   " "      " "                                          " "
## 7  ( 4 )   " "      "*"                                          " "
## 7  ( 5 )   " "      "*"                                          " "
## 7  ( 6 )   " "      "*"                                          " "
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## 7  ( 8 )   "*"      " "                                          " "
## 7  ( 9 )   "*"      "*"                                          " "
## 7  ( 10 )  " "      "*"                                          " "
## 8  ( 1 )   " "      "*"                                          " "
## 8  ( 2 )   " "      "*"                                          " "
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## 8  ( 5 )   "*"      " "                                          " "
## 8  ( 6 )   " "      " "                                          " "
## 8  ( 7 )   " "      " "                                          " "
## 8  ( 8 )   " "      " "                                          " "
## 8  ( 9 )   " "      " "                                          " "
## 8  ( 10 )  " "      " "                                          " "
## 9  ( 1 )   "*"      "*"                                          " "
## 9  ( 2 )   "*"      "*"                                          " "
## 9  ( 3 )   " "      "*"                                          " "
## 9  ( 4 )   " "      "*"                                          " "
## 9  ( 5 )   " "      "*"                                          " "
## 9  ( 6 )   " "      "*"                                          " "
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## 9  ( 7 )  " "     "*"                                              " "
## 9  ( 8 )  " "     "*"                                              " "
## 9  ( 9 )  " "     "*"                                              " "
## 9  ( 10 ) " "     "*"                                              " "
##           DailyRate DistanceFromHome EnvironmentSatisfaction
## MaritalStatus1
## 1  ( 1 )  " "       " "              " "                            " "
## 1  ( 2 )  " "       " "              " "                            " "
## 1  ( 3 )  " "       " "              " "                            " "
## 1  ( 4 )  " "       " "              " "                            " "
## 1  ( 5 )  " "       " "              " "                            " "
## 1  ( 6 )  " "       " "              " "                            " "
## 1  ( 7 )  " "       " "              " "                            " "
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## 1  ( 9 )  " "       " "              " "                            " "
## 1  ( 10 ) " "       " "              " "                            " "
## 2  ( 1 )  " "       " "              " "                            " "
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## 2  ( 10 ) " "       " "              " "                            " "
## 3  ( 1 )  " "       " "              " "                            " "
## 3  ( 2 )  " "       " "              " "                            " "
## 3  ( 3 )  " "       " "              "*"                            " "
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## 3  ( 5 )  " "       " "              "*"                            " "
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## 4  ( 5 )  " "       " "              " "                            " "
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## 4  ( 7 )  " "       " "              "*"                            " "
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## 9  ( 10 ) " "        " "              "*"          "*"
##           MaritalStatus2 HourlyRate JobInvolvement JobLevel
## JobSatisfaction
## 1  ( 1 )  " "            " "        " "            " "      " "
## 1  ( 2 )  " "            " "        " "            " "      " "
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## 4  ( 8  )  " "        " "        "*"        " "        " "
## 4  ( 9  )  "*"        " "        " "        " "        " "
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## 5  ( 1  )  " "        " "        "*"        " "        "*"
## 5  ( 2  )  " "        " "        "*"        "*"        "*"
## 5  ( 3  )  " "        " "        "*"        " "        " "
## 5  ( 4  )  " "        " "        "*"        " "        "*"
## 5  ( 5  )  "*"        " "        "*"        " "        " "
## 5  ( 6  )  "*"        " "        " "        " "        " "
## 5  ( 7  )  " "        " "        "*"        " "        "*"
## 5  ( 8  )  " "        " "        "*"        " "        " "
## 5  ( 9  )  "*"        " "        "*"        "*"        " "
## 5  ( 10 )  " "        " "        "*"        "*"        " "
## 6  ( 1  )  "*"        " "        "*"        " "        " "
## 6  ( 2  )  " "        " "        "*"        " "        "*"
```

```
## 6  ( 3 )  "*"          " "       "*"              " "           "*"
## 6  ( 4 )  "*"          " "       " "              " "           "*"
## 6  ( 5 )  "*"          " "       "*"              "*"           " "
## 6  ( 6 )  "*"          " "       "*"              "*"           "*"
## 6  ( 7 )  " "          " "       "*"              "*"           "*"
## 6  ( 8 )  " "          " "       "*"              " "           "*"
## 6  ( 9 )  "*"          " "       "*"              " "           " "
## 6  ( 10 ) "*"          " "       " "              "*"           "*"
## 7  ( 1 )  "*"          " "       "*"              " "           "*"
## 7  ( 2 )  "*"          " "       "*"              "*"           "*"
## 7  ( 3 )  "*"          " "       "*"              " "           "*"
## 7  ( 4 )  "*"          " "       "*"              " "           "*"
## 7  ( 5 )  "*"          " "       "*"              " "           " "
## 7  ( 6 )  "*"          " "       " "              " "           "*"
## 7  ( 7 )  "*"          " "       "*"              "*"           " "
## 7  ( 8 )  "*"          " "       "*"              " "           "*"
## 7  ( 9 )  " "          " "       "*"              " "           "*"
## 7  ( 10 ) "*"          " "       "*"              "*"           "*"
## 8  ( 1 )  "*"          " "       "*"              " "           "*"
## 8  ( 2 )  "*"          " "       "*"              "*"           "*"
## 8  ( 3 )  "*"          " "       "*"              " "           "*"
## 8  ( 4 )  "*"          " "       "*"              " "           "*"
## 8  ( 5 )  "*"          " "       "*"              " "           "*"
## 8  ( 6 )  "*"          " "       "*"              " "           "*"
## 8  ( 7 )  "*"          " "       "*"              "*"           "*"
## 8  ( 8 )  "*"          " "       "*"              " "           "*"
## 8  ( 9 )  "*"          " "       "*"              " "           "*"
## 8  ( 10 ) "*"          " "       "*"              "*"           "*"
## 9  ( 1 )  "*"          " "       "*"              " "           "*"
## 9  ( 2 )  "*"          " "       "*"              " "           "*"
## 9  ( 3 )  "*"          " "       "*"              " "           "*"
## 9  ( 4 )  "*"          " "       "*"              " "           "*"
## 9  ( 5 )  "*"          " "       "*"              "*"           "*"
## 9  ( 6 )  "*"          " "       "*"              " "           "*"
## 9  ( 7 )  "*"          " "       "*"              "*"           "*"
## 9  ( 8 )  "*"          " "       "*"              " "           "*"
## 9  ( 9 )  "*"          " "       "*"              " "           "*"
## 9  ( 10 ) "*"          " "       "*"              " "           "*"
##           MonthlyIncome OverTime1 PercentSalaryHike StandardHours
## 1  ( 1 )  " "           "*"       " "               " "
## 1  ( 2 )  " "           " "       " "               " "
## 1  ( 3 )  " "           " "       " "               " "
## 1  ( 4 )  " "           " "       " "               " "
## 1  ( 5 )  "*"           " "       " "               " "
## 1  ( 6 )  " "           " "       " "               " "
## 1  ( 7 )  " "           " "       " "               " "
## 1  ( 8 )  " "           " "       " "               " "
## 1  ( 9 )  " "           " "       " "               " "
## 1  ( 10 ) " "           " "       " "               " "
## 2  ( 1 )  " "           "*"       " "               " "
```

```
## 2  (  2 )   " "          "*"          " "               " "
## 2  (  3 )   " "          "*"          " "               " "
## 2  (  4 )   "*"          "*"          " "               " "
## 2  (  5 )   " "          "*"          " "               " "
## 2  (  6 )   " "          "*"          " "               " "
## 2  (  7 )   " "          "*"          " "               " "
## 2  (  8 )   " "          "*"          " "               " "
## 2  (  9 )   " "          "*"          " "               " "
## 2  ( 10 )   " "          "*"          " "               " "
## 3  (  1 )   " "          "*"          " "               " "
## 3  (  2 )   " "          "*"          " "               " "
## 3  (  3 )   " "          "*"          " "               " "
## 3  (  4 )   "*"          "*"          " "               " "
## 3  (  5 )   " "          "*"          " "               " "
## 3  (  6 )   " "          "*"          " "               " "
## 3  (  7 )   " "          "*"          " "               " "
## 3  (  8 )   " "          "*"          " "               " "
## 3  (  9 )   " "          "*"          " "               " "
## 3  ( 10 )   " "          "*"          " "               " "
## 4  (  1 )   " "          "*"          " "               " "
## 4  (  2 )   " "          "*"          " "               " "
## 4  (  3 )   " "          "*"          " "               " "
## 4  (  4 )   " "          "*"          " "               " "
## 4  (  5 )   " "          "*"          " "               " "
## 4  (  6 )   "*"          "*"          " "               " "
## 4  (  7 )   " "          "*"          " "               " "
## 4  (  8 )   " "          "*"          " "               " "
## 4  (  9 )   " "          "*"          " "               " "
## 4  ( 10 )   " "          "*"          " "               " "
## 5  (  1 )   " "          "*"          " "               " "
## 5  (  2 )   " "          "*"          " "               " "
## 5  (  3 )   " "          "*"          " "               " "
## 5  (  4 )   " "          "*"          " "               " "
## 5  (  5 )   " "          "*"          " "               " "
## 5  (  6 )   " "          "*"          " "               " "
## 5  (  7 )   "*"          "*"          " "               " "
## 5  (  8 )   " "          "*"          " "               " "
## 5  (  9 )   " "          "*"          " "               " "
## 5  ( 10 )   " "          "*"          " "               " "
## 6  (  1 )   " "          "*"          " "               " "
## 6  (  2 )   " "          "*"          " "               " "
## 6  (  3 )   " "          "*"          " "               " "
## 6  (  4 )   " "          "*"          " "               " "
## 6  (  5 )   " "          "*"          " "               " "
## 6  (  6 )   " "          "*"          " "               " "
## 6  (  7 )   " "          "*"          " "               " "
## 6  (  8 )   " "          "*"          " "               " "
## 6  (  9 )   "*"          "*"          " "               " "
## 6  ( 10 )   " "          "*"          " "               " "
## 7  (  1 )   " "          "*"          " "               " "
```

```
## 7  ( 2 )  " "              "*"             " "            " "
## 7  ( 3 )  "*"              "*"             " "            " "
## 7  ( 4 )  " "              "*"             " "            " "
## 7  ( 5 )  " "              "*"             " "            " "
## 7  ( 6 )  " "              "*"             " "            " "
## 7  ( 7 )  " "              "*"             " "            " "
## 7  ( 8 )  " "              "*"             " "            " "
## 7  ( 9 )  " "              "*"             " "            " "
## 7  ( 10 ) " "              "*"             " "            " "
## 8  ( 1 )  " "              "*"             " "            " "
## 8  ( 2 )  " "              "*"             " "            " "
## 8  ( 3 )  " "              "*"             " "            " "
## 8  ( 4 )  "*"              "*"             " "            " "
## 8  ( 5 )  " "              "*"             " "            " "
## 8  ( 6 )  " "              "*"             " "            " "
## 8  ( 7 )  " "              "*"             " "            " "
## 8  ( 8 )  " "              "*"             " "            " "
## 8  ( 9 )  " "              "*"             " "            " "
## 8  ( 10 ) " "              "*"             " "            " "
## 9  ( 1 )  " "              "*"             " "            " "
## 9  ( 2 )  " "              "*"             " "            " "
## 9  ( 3 )  " "              "*"             " "            " "
## 9  ( 4 )  " "              "*"             " "            " "
## 9  ( 5 )  " "              "*"             " "            " "
## 9  ( 6 )  " "              "*"             " "            " "
## 9  ( 7 )  " "              "*"             " "            " "
## 9  ( 8 )  "*"              "*"             " "            " "
## 9  ( 9 )  " "              "*"             " "            " "
## 9  ( 10 ) "*"              "*"             " "            " "
##          TotalWorkingYears WorkLifeBalance YearsAtCompany
YearsInCurrentRole
## 1  ( 1 )  " "                " "            " "            " "
## 1  ( 2 )  "*"                " "            " "            " "
## 1  ( 3 )  " "                " "            " "            " "
## 1  ( 4 )  " "                " "            " "            "*"
## 1  ( 5 )  " "                " "            " "            " "
## 1  ( 6 )  " "                " "            " "            " "
## 1  ( 7 )  " "                " "            " "            " "
## 1  ( 8 )  " "                " "            "*"            " "
## 1  ( 9 )  " "                " "            " "            " "
## 1  ( 10 ) " "                " "            " "            " "
## 2  ( 1 )  "*"                " "            " "            " "
## 2  ( 2 )  " "                " "            " "            " "
## 2  ( 3 )  " "                " "            " "            " "
## 2  ( 4 )  " "                " "            " "            " "
## 2  ( 5 )  " "                " "            " "            "*"
## 2  ( 6 )  " "                " "            " "            " "
## 2  ( 7 )  " "                " "            "*"            " "
## 2  ( 8 )  " "                " "            " "            " "
## 2  ( 9 )  " "                " "            " "            " "
```

```
## 2  ( 10 )  " "        " "        " "        " "
## 3  ( 1 )   "*"        " "        " "        " "
## 3  ( 2 )   " "        " "        " "        " "
## 3  ( 3 )   "*"        " "        " "        " "
## 3  ( 4 )   " "        " "        " "        " "
## 3  ( 5 )   " "        " "        " "        " "
## 3  ( 6 )   "*"        " "        " "        " "
## 3  ( 7 )   " "        " "        " "        " "
## 3  ( 8 )   " "        " "        " "        "*"
## 3  ( 9 )   " "        " "        " "        " "
## 3  ( 10 )  "*"        " "        " "        " "
## 4  ( 1 )   "*"        " "        " "        " "
## 4  ( 2 )   "*"        " "        " "        " "
## 4  ( 3 )   " "        " "        " "        " "
## 4  ( 4 )   "*"        " "        " "        " "
## 4  ( 5 )   " "        " "        " "        " "
## 4  ( 6 )   " "        " "        " "        " "
## 4  ( 7 )   "*"        " "        " "        " "
## 4  ( 8 )   " "        " "        " "        " "
## 4  ( 9 )   "*"        " "        " "        " "
## 4  ( 10 )  " "        " "        " "        "*"
## 5  ( 1 )   "*"        " "        " "        " "
## 5  ( 2 )   " "        " "        " "        " "
## 5  ( 3 )   "*"        " "        " "        " "
## 5  ( 4 )   "*"        " "        " "        " "
## 5  ( 5 )   "*"        " "        " "        " "
## 5  ( 6 )   "*"        " "        " "        " "
## 5  ( 7 )   " "        " "        " "        " "
## 5  ( 8 )   " "        " "        " "        "*"
## 5  ( 9 )   " "        " "        " "        " "
## 5  ( 10 )  " "        " "        " "        " "
## 6  ( 1 )   "*"        " "        " "        " "
## 6  ( 2 )   "*"        " "        " "        " "
## 6  ( 3 )   "*"        " "        " "        " "
## 6  ( 4 )   "*"        " "        " "        " "
## 6  ( 5 )   " "        " "        " "        " "
## 6  ( 6 )   " "        " "        " "        " "
## 6  ( 7 )   " "        " "        " "        " "
## 6  ( 8 )   " "        " "        " "        "*"
## 6  ( 9 )   " "        " "        " "        " "
## 6  ( 10 )  " "        " "        " "        " "
## 7  ( 1 )   "*"        " "        " "        " "
## 7  ( 2 )   " "        " "        " "        " "
## 7  ( 3 )   " "        " "        " "        " "
## 7  ( 4 )   "*"        " "        " "        " "
## 7  ( 5 )   "*"        " "        " "        " "
## 7  ( 6 )   "*"        " "        " "        " "
## 7  ( 7 )   " "        " "        " "        " "
## 7  ( 8 )   " "        " "        " "        " "
## 7  ( 9 )   " "        " "        " "        "*"
```

```
## 7  ( 10 ) " "                     " "                " "              " "
## 8  ( 1 )  "*"                     " "                " "              " "
## 8  ( 2 )  " "                     " "                " "              " "
## 8  ( 3 )  " "                     " "                " "              " "
## 8  ( 4 )  " "                     " "                " "              " "
## 8  ( 5 )  " "                     " "                " "              "*"
## 8  ( 6 )  "*"                     " "                " "              " "
## 8  ( 7 )  " "                     " "                " "              " "
## 8  ( 8 )  "*"                     " "                " "              " "
## 8  ( 9 )  "*"                     " "                " "              "*"
## 8  ( 10 ) " "                     " "                " "              "*"
## 9  ( 1 )  " "                     " "                " "              " "
## 9  ( 2 )  " "                     " "                " "              "*"
## 9  ( 3 )  "*"                     " "                " "              " "
## 9  ( 4 )  "*"                     " "                " "              " "
## 9  ( 5 )  " "                     " "                " "              " "
## 9  ( 6 )  "*"                     " "                " "              "*"
## 9  ( 7 )  " "                     " "                " "              "*"
## 9  ( 8 )  " "                     " "                " "              " "
## 9  ( 9 )  "*"                     "*"                " "              " "
## 9  ( 10 ) " "                     " "                " "              "*"
##           YearsSinceLastPromotion YearsWithCurrManager
## 1  ( 1 )  " "                     " "
## 1  ( 2 )  " "                     " "
## 1  ( 3 )  " "                     " "
## 1  ( 4 )  " "                     " "
## 1  ( 5 )  " "                     " "
## 1  ( 6 )  " "                     " "
## 1  ( 7 )  " "                     "*"
## 1  ( 8 )  " "                     " "
## 1  ( 9 )  " "                     " "
## 1  ( 10 ) " "                     " "
## 2  ( 1 )  " "                     " "
## 2  ( 2 )  " "                     " "
## 2  ( 3 )  " "                     " "
## 2  ( 4 )  " "                     " "
## 2  ( 5 )  " "                     " "
## 2  ( 6 )  " "                     "*"
## 2  ( 7 )  " "                     " "
## 2  ( 8 )  " "                     " "
## 2  ( 9 )  " "                     " "
## 2  ( 10 ) " "                     " "
## 3  ( 1 )  " "                     " "
## 3  ( 2 )  " "                     " "
## 3  ( 3 )  " "                     " "
## 3  ( 4 )  " "                     " "
## 3  ( 5 )  " "                     " "
## 3  ( 6 )  " "                     " "
## 3  ( 7 )  " "                     " "
## 3  ( 8 )  " "                     " "
```

```
## 3  ( 9  )  " "                              " "
## 3  ( 10 )  " "                              " "
## 4  ( 1  )  " "                              " "
## 4  ( 2  )  " "                              " "
## 4  ( 3  )  " "                              " "
## 4  ( 4  )  " "                              " "
## 4  ( 5  )  " "                              " "
## 4  ( 6  )  " "                              " "
## 4  ( 7  )  " "                              " "
## 4  ( 8  )  " "                              " "
## 4  ( 9  )  " "                              " "
## 4  ( 10 )  " "                              " "
## 5  ( 1  )  " "                              " "
## 5  ( 2  )  " "                              " "
## 5  ( 3  )  " "                              " "
## 5  ( 4  )  " "                              " "
## 5  ( 5  )  " "                              " "
## 5  ( 6  )  " "                              " "
## 5  ( 7  )  " "                              " "
## 5  ( 8  )  " "                              " "
## 5  ( 9  )  " "                              " "
## 5  ( 10 )  " "                              " "
## 6  ( 1  )  " "                              " "
## 6  ( 2  )  " "                              " "
## 6  ( 3  )  " "                              " "
## 6  ( 4  )  " "                              " "
## 6  ( 5  )  " "                              " "
## 6  ( 6  )  " "                              " "
## 6  ( 7  )  " "                              " "
## 6  ( 8  )  " "                              " "
## 6  ( 9  )  " "                              " "
## 6  ( 10 )  " "                              " "
## 7  ( 1  )  " "                              " "
## 7  ( 2  )  " "                              " "
## 7  ( 3  )  " "                              " "
## 7  ( 4  )  " "                              " "
## 7  ( 5  )  " "                              " "
## 7  ( 6  )  " "                              " "
## 7  ( 7  )  " "                              " "
## 7  ( 8  )  " "                              " "
## 7  ( 9  )  " "                              " "
## 7  ( 10 )  " "                              " "
## 8  ( 1  )  " "                              " "
## 8  ( 2  )  " "                              " "
## 8  ( 3  )  " "                              "*"
## 8  ( 4  )  " "                              " "
## 8  ( 5  )  " "                              " "
## 8  ( 6  )  " "                              " "
## 8  ( 7  )  " "                              "*"
## 8  ( 8  )  " "                              "*"
```

```
## 8  ( 9  )  " "                              " "
## 8  ( 10 )  " "                              " "
## 9  ( 1  )   " "                             "*"
## 9  ( 2  )   " "                             " "
## 9  ( 3  )   " "                             " "
## 9  ( 4  )   " "                             "*"
## 9  ( 5  )   " "                             "*"
## 9  ( 6  )   " "                             " "
## 9  ( 7  )   " "                             " "
## 9  ( 8  )   " "                             "*"
## 9  ( 9  )   " "                             " "
## 9  ( 10 )  " "                              " "

regsubsets

## function (x, ...)
## {
##     UseMethod("regsubsets", x)
## }
## <bytecode: 0x000000001eaf6d50>
## <environment: namespace:leaps>

summary(leaps)

## Subset selection object
## Call: regsubsets.formula(Attrition ~ ï..Age + BusinessTravel + DailyRate +
##      DistanceFromHome + EnvironmentSatisfaction + MaritalStatus +
##      HourlyRate + JobInvolvement + JobLevel + JobSatisfaction +
##      MaritalStatus + MonthlyIncome + OverTime + PercentSalaryHike +
##      StandardHours + TotalWorkingYears + WorkLifeBalance + YearsAtCompany +
##      YearsInCurrentRole + YearsSinceLastPromotion + YearsWithCurrManager,
##      data = emp_churn, nbest = 10)
## 22 Variables  (and intercept)
##                                     Forced in Forced out
## ï..Age                                FALSE      FALSE
## BusinessTravelTravel_Frequently       FALSE      FALSE
## BusinessTravelTravel_Rarely           FALSE      FALSE
## DailyRate                             FALSE      FALSE
## DistanceFromHome                      FALSE      FALSE
## EnvironmentSatisfaction               FALSE      FALSE
## MaritalStatus1                        FALSE      FALSE
## MaritalStatus2                        FALSE      FALSE
## HourlyRate                            FALSE      FALSE
## JobInvolvement                        FALSE      FALSE
## JobLevel                              FALSE      FALSE
## JobSatisfaction                       FALSE      FALSE
## MonthlyIncome                         FALSE      FALSE
## OverTime1                             FALSE      FALSE
## PercentSalaryHike                     FALSE      FALSE
## TotalWorkingYears                     FALSE      FALSE
## WorkLifeBalance                       FALSE      FALSE
```

```
## YearsAtCompany                        FALSE     FALSE
## YearsInCurrentRole                     FALSE     FALSE
## YearsSinceLastPromotion                FALSE     FALSE
## YearsWithCurrManager                   FALSE     FALSE
## StandardHours                          FALSE     FALSE
## 10 subsets of each size up to 9
## Selection Algorithm: exhaustive
##             ï..Age BusinessTravelTravel_Frequently
BusinessTravelTravel_Rarely
## 1  ( 1 )  " "    " "                               " "
## 1  ( 2 )  " "    " "                               " "
## 1  ( 3 )  " "    " "                               " "
## 1  ( 4 )  " "    " "                               " "
## 1  ( 5 )  " "    " "                               " "
## 1  ( 6 )  "*"    " "                               " "
## 1  ( 7 )  " "    " "                               " "
## 1  ( 8 )  " "    " "                               " "
## 1  ( 9 )  " "    " "                               " "
## 1  ( 10 ) " "    "*"                               " "
## 2  ( 1 )  " "    " "                               " "
## 2  ( 2 )  " "    " "                               " "
## 2  ( 3 )  "*"    " "                               " "
## 2  ( 4 )  " "    " "                               " "
## 2  ( 5 )  " "    " "                               " "
## 2  ( 6 )  " "    " "                               " "
## 2  ( 7 )  " "    " "                               " "
## 2  ( 8 )  " "    " "                               " "
## 2  ( 9 )  " "    " "                               " "
## 2  ( 10 ) " "    " "                               " "
## 3  ( 1 )  " "    " "                               " "
## 3  ( 2 )  " "    " "                               " "
## 3  ( 3 )  " "    " "                               " "
## 3  ( 4 )  " "    " "                               " "
## 3  ( 5 )  " "    " "                               " "
## 3  ( 6 )  " "    " "                               " "
## 3  ( 7 )  "*"    " "                               " "
## 3  ( 8 )  "*"    " "                               " "
## 3  ( 9 )  "*"    " "                               " "
## 3  ( 10 ) " "    "*"                               " "
## 4  ( 1 )  " "    " "                               " "
## 4  ( 2 )  " "    " "                               " "
## 4  ( 3 )  " "    " "                               " "
## 4  ( 4 )  " "    "*"                               " "
## 4  ( 5 )  " "    " "                               " "
## 4  ( 6 )  " "    " "                               " "
## 4  ( 7 )  " "    " "                               " "
## 4  ( 8 )  "*"    " "                               " "
## 4  ( 9 )  " "    " "                               " "
## 4  ( 10 ) "*"    " "                               " "
## 5  ( 1 )  " "    " "                               " "
```

```
## 5  ( 2 )  " "    " "                              " "
## 5  ( 3 )  " "    "*"                              " "
## 5  ( 4 )  " "    "*"                              " "
## 5  ( 5 )  " "    " "                              " "
## 5  ( 6 )  " "    " "                              " "
## 5  ( 7 )  " "    " "                              " "
## 5  ( 8 )  "*"    " "                              " "
## 5  ( 9 )  " "    " "                              " "
## 5  ( 10 ) " "    "*"                              " "
## 6  ( 1 )  " "    " "                              " "
## 6  ( 2 )  " "    "*"                              " "
## 6  ( 3 )  " "    " "                              " "
## 6  ( 4 )  " "    " "                              " "
## 6  ( 5 )  " "    " "                              " "
## 6  ( 6 )  " "    " "                              " "
## 6  ( 7 )  " "    "*"                              " "
## 6  ( 8 )  "*"    " "                              " "
## 6  ( 9 )  " "    " "                              " "
## 6  ( 10 ) " "    " "                              " "
## 7  ( 1 )  " "    " "                              " "
## 7  ( 2 )  " "    " "                              " "
## 7  ( 3 )  " "    " "                              " "
## 7  ( 4 )  " "    "*"                              " "
## 7  ( 5 )  " "    "*"                              " "
## 7  ( 6 )  " "    "*"                              " "
## 7  ( 7 )  " "    "*"                              " "
## 7  ( 8 )  "*"    " "                              " "
## 7  ( 9 )  "*"    "*"                              " "
## 7  ( 10 ) " "    "*"                              " "
## 8  ( 1 )  " "    "*"                              " "
## 8  ( 2 )  " "    "*"                              " "
## 8  ( 3 )  "*"    " "                              " "
## 8  ( 4 )  " "    "*"                              " "
## 8  ( 5 )  "*"    " "                              " "
## 8  ( 6 )  " "    " "                              " "
## 8  ( 7 )  " "    " "                              " "
## 8  ( 8 )  " "    " "                              " "
## 8  ( 9 )  " "    " "                              " "
## 8  ( 10 ) " "    " "                              " "
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## 9  ( 3 )  " "    "*"                              " "
## 9  ( 4 )  " "    "*"                              " "
## 9  ( 5 )  " "    "*"                              " "
## 9  ( 6 )  " "    "*"                              " "
## 9  ( 7 )  " "    "*"                              " "
## 9  ( 8 )  " "    "*"                              " "
## 9  ( 9 )  " "    "*"                              " "
## 9  ( 10 ) " "    "*"                              " "
##           DailyRate DistanceFromHome EnvironmentSatisfaction
```

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## 1  ( 7 )   " "        " "              " "              " "
## 1  ( 8 )   " "        " "              " "              " "
## 1  ( 9 )   " "        " "              " "              " "
## 1  ( 10 )  " "        " "              " "              " "
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## 4  ( 10 )  " "        " "              " "              " "
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## 5  ( 2 )   " "        " "              "*"              " "
## 5  ( 3 )   " "        " "              "*"              " "
## 5  ( 4 )   " "        " "              " "              " "
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## 5  ( 8 )   " "        " "              "*"              " "
## 5  ( 9 )   " "        " "              " "              "*"
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## 7  ( 7 )  " "         " "             "*"                     "*"
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##           MaritalStatus2 HourlyRate JobInvolvement JobLevel
JobSatisfaction
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## 1  ( 7 )  " "            " "        " "            " "      " "
```

```
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## 1  ( 9  )  " "          " "          "*"          " "          " "
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## 2  ( 3  )  " "          " "          " "          " "          " "
## 2  ( 4  )  " "          " "          " "          " "          " "
## 2  ( 5  )  " "          " "          " "          " "          " "
## 2  ( 6  )  " "          " "          " "          " "          " "
## 2  ( 7  )  " "          " "          " "          " "          " "
## 2  ( 8  )  " "          " "          "*"          " "          " "
## 2  ( 9  )  " "          " "          " "          " "          " "
## 2  ( 10 )  " "          " "          " "          " "          "*"
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## 3  ( 2  )  " "          " "          "*"          "*"          " "
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## 3  ( 4  )  " "          " "          "*"          " "          " "
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## 3  ( 7  )  " "          " "          "*"          " "          " "
## 3  ( 8  )  " "          " "          " "          " "          " "
## 3  ( 9  )  " "          " "          " "          " "          " "
## 3  ( 10 )  " "          " "          " "          " "          " "
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## 5  ( 10 )  " "          " "          "*"          "*"          " "
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## 6  ( 7  )  " "          " "          "*"          "*"          "*"
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## 7  ( 3 )  "*"             " "       "*"               " "           "*"
## 7  ( 4 )  "*"             " "       "*"               " "           "*"
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## 7  ( 9 )  " "             " "       "*"               " "           "*"
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## 8  ( 10 ) "*"             " "       "*"               "*"           "*"
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## 9  ( 5 )  "*"             " "       "*"               "*"           "*"
## 9  ( 6 )  "*"             " "       "*"               " "           "*"
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## 9  ( 10 ) "*"             " "       "*"               " "           "*"
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## 1  ( 7 )  " "           " "       " "               " "
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## 1  ( 10 ) " "           " "       " "               " "
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## 2  ( 3 )  " "           "*"       " "               " "
## 2  ( 4 )  "*"           "*"       " "               " "
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## 2  ( 6 )  " "           "*"       " "               " "
```

```
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## 4  ( 8  ) " "          "*"         " "          " "
## 4  ( 9  ) " "          "*"         " "          " "
## 4  ( 10 ) " "          "*"         " "          " "
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## 5  ( 4  ) " "          "*"         " "          " "
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## 7  ( 6  ) " "          "*"         " "          " "
```

```
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## 8  ( 3 )  " "              "*"              " "              " "
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## 9  ( 4 )  " "              "*"              " "              " "
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## 9  ( 10 ) "*"              "*"              " "              " "
##           TotalWorkingYears WorkLifeBalance YearsAtCompany
## YearsInCurrentRole
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## 1  ( 2 )  "*"              " "              " "              " "
## 1  ( 3 )  " "              " "              " "              " "
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## 1  ( 10 ) " "              " "              " "              " "
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## 2  ( 3 )  " "              " "              " "              " "
## 2  ( 4 )  " "              " "              " "              " "
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## 2  ( 10 ) " "              " "              " "              " "
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## 3  ( 3 )  "*"              " "              " "              " "
## 3  ( 4 )  " "              " "              " "              " "
```

```
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## 4  ( 8 )  " "      " "      " "      " "
## 4  ( 9 )  "*"      " "      " "      " "
## 4  ( 10 ) " "      " "      " "      "*"
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## 5  ( 10 ) " "      " "      " "      " "
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## 7  ( 10 ) " "      " "      " "      " "
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## 8  ( 4 )  " "      " "      " "      " "
```

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## 8  ( 10 ) " "                  " "                " "              "*"
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## 9  ( 3 )  "*"                  " "                " "              " "
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## 2  ( 3 )  " "                       " "
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## 2  ( 5 )  " "                       " "
## 2  ( 6 )  " "                       "*"
## 2  ( 7 )  " "                       " "
## 2  ( 8 )  " "                       " "
## 2  ( 9 )  " "                       " "
## 2  ( 10 ) " "                       " "
## 3  ( 1 )  " "                       " "
## 3  ( 2 )  " "                       " "
## 3  ( 3 )  " "                       " "
## 3  ( 4 )  " "                       " "
## 3  ( 5 )  " "                       " "
## 3  ( 6 )  " "                       " "
## 3  ( 7 )  " "                       " "
## 3  ( 8 )  " "                       " "
## 3  ( 9 )  " "                       " "
## 3  ( 10 ) " "                       " "
## 4  ( 1 )  " "                       " "
## 4  ( 2 )  " "                       " "
## 4  ( 3 )  " "                       " "
```

```
## 4  (  4 )   " "                        " "
## 4  (  5 )   " "                        " "
## 4  (  6 )   " "                        " "
## 4  (  7 )   " "                        " "
## 4  (  8 )   " "                        " "
## 4  (  9 )   " "                        " "
## 4  ( 10 )   " "                        " "
## 5  (  1 )   " "                        " "
## 5  (  2 )   " "                        " "
## 5  (  3 )   " "                        " "
## 5  (  4 )   " "                        " "
## 5  (  5 )   " "                        " "
## 5  (  6 )   " "                        " "
## 5  (  7 )   " "                        " "
## 5  (  8 )   " "                        " "
## 5  (  9 )   " "                        " "
## 5  ( 10 )   " "                        " "
## 6  (  1 )   " "                        " "
## 6  (  2 )   " "                        " "
## 6  (  3 )   " "                        " "
## 6  (  4 )   " "                        " "
## 6  (  5 )   " "                        " "
## 6  (  6 )   " "                        " "
## 6  (  7 )   " "                        " "
## 6  (  8 )   " "                        " "
## 6  (  9 )   " "                        " "
## 6  ( 10 )   " "                        " "
## 7  (  1 )   " "                        " "
## 7  (  2 )   " "                        " "
## 7  (  3 )   " "                        " "
## 7  (  4 )   " "                        " "
## 7  (  5 )   " "                        " "
## 7  (  6 )   " "                        " "
## 7  (  7 )   " "                        " "
## 7  (  8 )   " "                        " "
## 7  (  9 )   " "                        " "
## 7  ( 10 )   " "                        " "
## 8  (  1 )   " "                        " "
## 8  (  2 )   " "                        " "
## 8  (  3 )   " "                        "*"
## 8  (  4 )   " "                        " "
## 8  (  5 )   " "                        " "
## 8  (  6 )   " "                        " "
## 8  (  7 )   " "                        "*"
## 8  (  8 )   " "                        "*"
## 8  (  9 )   " "                        " "
## 8  ( 10 )   " "                        " "
## 9  (  1 )   " "                        "*"
## 9  (  2 )   " "                        " "
## 9  (  3 )   " "                        " "
```

```
## 9  ( 4 )   " "                           "*"
## 9  ( 5 )   " "                           "*"
## 9  ( 6 )   " "                           " "
## 9  ( 7 )   " "                           " "
## 9  ( 8 )   " "                           "*"
## 9  ( 9 )   " "                           " "
## 9  ( 10 )  " "                           " "
```

```
leaps
```

```
## Subset selection object
## Call: regsubsets.formula(Attrition ~ ï..Age + BusinessTravel + DailyRate +
##     DistanceFromHome + EnvironmentSatisfaction + MaritalStatus +
##     HourlyRate + JobInvolvement + JobLevel + JobSatisfaction +
##     MaritalStatus + MonthlyIncome + OverTime + PercentSalaryHike +
##     StandardHours + TotalWorkingYears + WorkLifeBalance + YearsAtCompany +
##     YearsInCurrentRole + YearsSinceLastPromotion + YearsWithCurrManager,
##     data = emp_churn, nbest = 10)
## 22 Variables  (and intercept)
##                                   Forced in Forced out
## ï..Age                              FALSE      FALSE
## BusinessTravelTravel_Frequently     FALSE      FALSE
## BusinessTravelTravel_Rarely         FALSE      FALSE
## DailyRate                           FALSE      FALSE
## DistanceFromHome                    FALSE      FALSE
## EnvironmentSatisfaction             FALSE      FALSE
## MaritalStatus1                      FALSE      FALSE
## MaritalStatus2                      FALSE      FALSE
## HourlyRate                          FALSE      FALSE
## JobInvolvement                      FALSE      FALSE
## JobLevel                            FALSE      FALSE
## JobSatisfaction                     FALSE      FALSE
## MonthlyIncome                       FALSE      FALSE
## OverTime1                           FALSE      FALSE
## PercentSalaryHike                   FALSE      FALSE
## TotalWorkingYears                   FALSE      FALSE
## WorkLifeBalance                     FALSE      FALSE
## YearsAtCompany                      FALSE      FALSE
## YearsInCurrentRole                  FALSE      FALSE
## YearsSinceLastPromotion             FALSE      FALSE
## YearsWithCurrManager                FALSE      FALSE
## StandardHours                       FALSE      FALSE
## 10 subsets of each size up to 9
## Selection Algorithm: exhaustive
```

```
coef(leaps,1:10)
```

```
## [[1]]
## (Intercept)    OverTime1
##   0.1043643    0.2009241
##
```

```
## [[2]]
##     (Intercept) WorkLifeBalance
##      0.25315437     -0.03329316
##
## [[3]]
## (Intercept)    JobLevel
##  0.27721332 -0.05619762
##
## [[4]]
##              (Intercept) YearsSinceLastPromotion
##              0.169470850            -0.003769325
##
## [[5]]
##    (Intercept) MonthlyIncome
##  0.2424415341 -0.0000124893
##
## [[6]]
##  (Intercept)        ï..Age
##  0.397938009 -0.006410864
##
## [[7]]
##    (Intercept) StandardHours
##      0.1612245     0.0000000
##
## [[8]]
##        (Intercept) YearsInCurrentRole
##          0.2301630         -0.0163004
##
## [[9]]
##    (Intercept) JobInvolvement
##     0.34471872    -0.06721568
##
## [[10]]
##                    (Intercept) BusinessTravelTravel_Frequently
##                      0.1408215                        0.1082760

summary(x)

##
## Call:
## lm(formula = Attrition ~ ï..Age + BusinessTravel + DailyRate +
##     DistanceFromHome + EnvironmentSatisfaction + MaritalStatus +
##     HourlyRate + JobInvolvement + JobLevel + JobSatisfaction +
##     MaritalStatus + MonthlyIncome + OverTime + PercentSalaryHike +
##     StandardHours + TotalWorkingYears + WorkLifeBalance + YearsAtCompany +
##     YearsInCurrentRole + YearsSinceLastPromotion + YearsWithCurrManager,
##     data = emp_churn)
##
## Residuals:
##      Min        1Q    Median        3Q       Max
```

```
## -0.56216 -0.20840 -0.09171  0.05753  1.11567
##
## Coefficients: (1 not defined because of singularities)
##                                 Estimate Std. Error t value Pr(>|t|)
## (Intercept)                      8.341e-01  9.065e-02    9.201  < 2e-16 ***
## ï..Age                          -3.162e-03  1.326e-03   -2.384  0.01726 *
## BusinessTravelTravel_Frequently  1.514e-01  3.360e-02    4.505 7.18e-06 ***
## BusinessTravelTravel_Rarely      6.512e-02  2.904e-02    2.243  0.02507 *
## DailyRate                       -2.791e-05  2.154e-05   -1.295  0.19538
## DistanceFromHome                 3.460e-03  1.068e-03    3.239  0.00123 **
## EnvironmentSatisfaction         -4.029e-02  7.927e-03   -5.083 4.20e-07 ***
## MaritalStatus1                  -1.102e-01  2.014e-02   -5.474 5.17e-08 ***
## MaritalStatus2                  -1.349e-01  2.399e-02   -5.622 2.26e-08 ***
## HourlyRate                      -2.170e-04  4.271e-04   -0.508  0.61150
## JobInvolvement                  -6.229e-02  1.220e-02   -5.107 3.71e-07 ***
## JobLevel                        -2.387e-02  2.604e-02   -0.917  0.35937
## JobSatisfaction                 -4.033e-02  7.858e-03   -5.132 3.25e-07 ***
## MonthlyIncome                   -3.525e-07  6.016e-06   -0.059  0.95329
## OverTime1                        2.024e-01  1.924e-02   10.522  < 2e-16 ***
## PercentSalaryHike               -1.674e-03  2.365e-03   -0.708  0.47918
## StandardHours                          NA         NA       NA       NA
## TotalWorkingYears               -1.479e-03  2.358e-03   -0.627  0.53049
## WorkLifeBalance                 -2.903e-02  1.227e-02   -2.365  0.01815 *
## YearsAtCompany                   2.603e-03  2.931e-03    0.888  0.37455
## YearsInCurrentRole              -9.064e-03  3.914e-03   -2.316  0.02070 *
## YearsSinceLastPromotion          1.187e-02  3.455e-03    3.435  0.00061 ***
## YearsWithCurrManager            -1.092e-02  4.019e-03   -2.718  0.00666 **
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.33 on 1448 degrees of freedom
## Multiple R-squared:  0.207,  Adjusted R-squared:  0.1955
## F-statistic:    18 on 21 and 1448 DF,  p-value: < 2.2e-16

#Interpretation

#We have implemented a multiple linear regression model and have drawn
certain conclusions.
#By implementing the model, we can say that,
# 1.) We are 99.99% sure that age is a highly significant variable in
predicting attrition.
# 2.) We are 99.99% sure that frequent travel also contribute a lot in
predicitng attrition.
# 3.) Similarly Environment satisfaction, Marital status, Job Involvement,
Overtime and promotion also contribute to the prediction of attrition.


#Also, based on the estimate values, we can write the equation and prediction
the attrition value where 1 is yes and 0 is no.
```