NRSG 741 Homework 5

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# Homework 5 - DUE March 15, 2017

For this homework, we'll work with the "Wong" dataset built in to the car package. The "Wong" data frame has 331 row and 7 columns. The observations are longitudinal data on recovery of IQ after comas of varying duration for 200 subjects. The data are from Wong, Monette, and Weiner (2001) and are for 200 patients who sustained traumatic brain injuries resulting in comas of varying duration. After awakening from their comas, patients were periodically administered a standard IQ test, but the average number of measurements per patient is small (331/200 = 1.7). *To get more info type ??Wong.*

The 7 variables in the dataset are:

* id
  + patient ID number.
* days
  + number of days post coma at which IQs were measured.
* duration
  + duration of the coma in days.
* sex
  + a factor with levels Female and Male.
* age
  + in years at the time of injury.
* piq
  + performance (i.e., mathematical) IQ.
* viq
  + verbal IQ.

## Load dataset in from car package

library(car)  
data(Wong)  
  
library(dplyr)

##   
## Attaching package: 'dplyr'

## The following object is masked from 'package:car':  
##   
## recode

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

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

# add an age group variable  
Wong$agegrp <- case\_when(  
 (Wong$age > 0 & Wong$age <= 10) ~ 1,  
 (Wong$age > 10 & Wong$age <= 20) ~ 2,  
 (Wong$age > 20 & Wong$age <= 30) ~ 3,  
 (Wong$age > 30 & Wong$age <= 40) ~ 4,  
 (Wong$age > 40 & Wong$age <= 50) ~ 5,  
 (Wong$age > 50 & Wong$age <= 60) ~ 6,  
 (Wong$age > 60 & Wong$age <= 70) ~ 7,  
 (Wong$age > 70 & Wong$age <= 100) ~ 8)  
  
# convert to factor, add code levels and labels  
Wong$agegrp <- factor(Wong$agegrp,  
 levels = c(1,2,3,4,5,6,7,8),  
 labels = c("Ages 1-10",  
 "Ages 11-10",  
 "Ages 21-10",  
 "Ages 31-10",  
 "Ages 41-10",  
 "Ages 51-10",  
 "Ages 61-70",  
 "Ages 71-100"))

Using this dataset, and today's demos complete the following tasks:

1. Make a table of non-parametric statistics (median and IQR) for the number of days and duration grouped by sex. You'll be using summarise() from the dplyr package. For a given variable x you'll use median(x, na.rm=TRUE), quantile(x, 0.25, na.rm=TRUE), and quantile(x, 0.75, na.rm=TRUE). Give the table a title using the caption= option and update the column names with something nice using the col.names= option in the knitr::kable() command.

Table1 <- Wong %>%  
group\_by(sex) %>%  
summarise(firstquantiledays = quantile(days,0.25, na.rm=TRUE), mediandays = median(days, na.rm=TRUE), thirdrdquantiledays = quantile(days, 0.75, na.rm=TRUE), firstquantileduration = quantile(duration, 0.25, na.rm=TRUE), medianduration = median(duration, na.rm=TRUE), thirdquantileduration = quantile(duration, 0.75, na.rm=TRUE))  
  
knitr::kable(Table1, col.names=c("Sex", "1st Quantile Days", "Median Days", "3rd Quntile Days", "1st Quantile Duration", "Median Duration", "3rd Quantile Duration"), caption = "Summary Statistics of Days Post Coma and the Duration of Coma Grouped by Sex")

Summary Statistics of Days Post Coma and the Duration of Coma Grouped by Sex

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Sex | 1st Quantile Days | Median Days | 3rd Quntile Days | 1st Quantile Duration | Median Duration | 3rd Quantile Duration |
| Female | 58.50 | 135 | 361.00 | 1 | 4 | 11 |
| Male | 59.75 | 163 | 431.25 | 1 | 7 | 18 |

1. Make a table of parametric statistics (mean and SD) for the performance outcomes piq and viq grouped by sex. Like the table above, you'll be using summarise() from the dplyr package. Now you'll use mean(x, na.rm=TRUE) and sd(x, na.rm=TRUE). Give the table a title using the caption= option and update the column names with something nice using the col.names= option in the knitr::kable() command.

Table2 <- Wong %>%  
group\_by(sex) %>%  
summarise(avgperformance = mean(piq, na.rm=TRUE), sdperformance = sd(piq, na.rm=TRUE), avgverbal = mean(viq, na.rm=TRUE), sdverbal = sd(viq, na.rm=TRUE))  
  
knitr::kable(Table2, col.names=c("Sex", "Mean Performance", "Performance SD", "Mean Verbal", "Verbal SD"), caption="Performance IQ and Verbal IQ Summary Statistics Grouped by Sex")

Performance IQ and Verbal IQ Summary Statistics Grouped by Sex

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sex | Mean Performance | Performance SD | Mean Verbal | Verbal SD |
| Female | 89.18310 | 17.99866 | 94.35211 | 14.24690 |
| Male | 87.11154 | 14.25658 | 95.13077 | 14.02281 |

1. Make a table containing the frequencies and relative percentages for agegrp. Use the example we did in class to help guide you.

#To add age group variable  
Wong$agegrp <- case\_when(  
 (Wong$age > 0 & Wong$age <= 10) ~ 1,  
 (Wong$age > 10 & Wong$age <= 20) ~ 2,  
 (Wong$age > 20 & Wong$age <= 30) ~ 3,  
 (Wong$age > 30 & Wong$age <= 40) ~ 4,  
 (Wong$age > 40 & Wong$age <= 50) ~ 5,  
 (Wong$age > 50 & Wong$age <= 60) ~ 6,  
 (Wong$age > 60 & Wong$age <= 70) ~ 7,  
 (Wong$age > 70 & Wong$age <= 100) ~ 8)  
  
#To convert to factor and add code levels and labels  
Wong$agegrp <- factor(Wong$agegrp, levels = c(1,2,3,4,5,6,7,8), labels = c("Ages 1-10", "Ages 11-10", "Ages 21-10", "Ages 31-10", "Ages 41-10", "Ages 51-10", "Ages 61-70", "Ages 71-100"))  
  
#To find sample size or number of rows in dataset  
ss <- length(Wong$agegrp)  
  
#To group by each level of age group, find the raw counts and compute the relative %  
Table3 <- Wong %>%  
 group\_by(agegrp) %>%  
 summarise(freq = n(), pct = n()\*100/ss)  
  
#To make a summary table  
knitr::kable(Table3, col.names = c("Age Group", "Frequency", "Percent"), caption="Frequency Table Sorted by Age Group")

Frequency Table Sorted by Age Group

|  |  |  |
| --- | --- | --- |
| Age Group | Frequency | Percent |
| Ages 1-10 | 1 | 0.3021148 |
| Ages 11-10 | 53 | 16.0120846 |
| Ages 21-10 | 144 | 43.5045317 |
| Ages 31-10 | 48 | 14.5015106 |
| Ages 41-10 | 42 | 12.6888218 |
| Ages 51-10 | 27 | 8.1570997 |
| Ages 61-70 | 14 | 4.2296073 |
| Ages 71-100 | 2 | 0.6042296 |

1. Make a regression model (Model 1) for the performance IQ (piq) using age and sex. Put the regression model results into a table.

m1 <- lm(piq~age + sex, data=Wong)  
sm1 <- summary(m1)  
knitr::kable(sm1$coefficients, caption="Model 1: Performance IQ vs Age and Sex")

Model 1: Performance IQ vs Age and Sex

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Estimate | Std. Error | t value | Pr(>|t|) |
| (Intercept) | 86.8868114 | 2.5796740 | 33.681314 | 0.0000000 |
| age | 0.0743977 | 0.0600527 | 1.238874 | 0.2162781 |
| sexMale | -2.1651531 | 2.0258169 | -1.068780 | 0.2859546 |

1. Make a second regression model (Model 2) for performance IQ (piq) using age and sex plus days and duration. Put the regression model results into a table.

m2 <- lm(piq~age+sex+days+duration, data=Wong)  
sm2 <- summary(m2)  
knitr::kable(sm2$coefficients, caption="Model 2: Performance IQ vs Age, Sex, Days and Duration")

Model 2: Performance IQ vs Age, Sex, Days and Duration

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Estimate | Std. Error | t value | Pr(>|t|) |
| (Intercept) | 88.0961373 | 2.6462149 | 33.2913764 | 0.0000000 |
| age | 0.0542142 | 0.0604989 | 0.8961181 | 0.3708509 |
| sexMale | -1.7252891 | 2.0152576 | -0.8561135 | 0.3925638 |
| days | 0.0011534 | 0.0007457 | 1.5468461 | 0.1228705 |
| duration | -0.1026657 | 0.0328189 | -3.1282468 | 0.0019172 |

1. Finally, make a table showing the results from the anova() command comparing Model 1 and Model 2 you made above using the example we did in class as a guide.

anova(m1,m2)

## Analysis of Variance Table  
##   
## Model 1: piq ~ age + sex  
## Model 2: piq ~ age + sex + days + duration  
## Res.Df RSS Df Sum of Sq F Pr(>F)   
## 1 328 74968   
## 2 326 72586 2 2381.9 5.3489 0.00518 \*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

## Analysis of Variance Table  
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## Model 1: piq ~ age + sex  
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## ---  
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## Analysis of Variance Table  
##   
## Model 1: piq ~ age + sex  
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## Res.Df RSS Df Sum of Sq F Pr(>F)   
## 1 328 74968   
## 2 326 72586 2 2381.9 5.3489 0.00518 \*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
m1m2 <- anova(m1,m2)  
row.names(m1m2) <- c("Model 1","Model 2")  
knitr::kable(m1m2, caption = "Compare Model 1 and Model 2")

Compare Model 1 and Model 2

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Res.Df | RSS | Df | Sum of Sq | F | Pr(>F) |
| Model 1 | 328 | 74967.59 | NA | NA | NA | NA |
| Model 2 | 326 | 72585.66 | 2 | 2381.933 | 5.348922 | 0.0051796 |

1. STUDENT CHOICE - pick either a htmlwidget from <http://gallery.htmlwidgets.org/> or do a "flexdashboard" using the templates at <http://rmarkdown.rstudio.com/flexdashboard/> as a guide.

## Column

### Age in Wong dataset

car::Wong

## id days duration sex age piq viq  
## 1 3358 30 4 Male 20.670770 87 89  
## 2 3535 16 17 Male 55.288160 95 77  
## 3 3547 40 1 Male 55.915130 95 116  
## 4 3592 13 10 Male 61.664610 59 73  
## 5 3728 19 6 Male 30.127310 67 73  
## 6 3790 13 3 Male 57.062290 76 69  
## 7 3807 37 5 Male 24.676250 74 77  
## 8 3808 31 7 Male 28.268310 91 110  
## 9 4253 40 3 Male 22.603700 115 110  
## 10 4356 31 7 Male 21.399040 86 83  
## 11 4384 35 8 Male 36.380560 76 90  
## 12 4542 22 11 Female 21.957560 71 89  
## 13 4705 18 1 Female 21.683780 127 109  
## 14 4744 15 25 Male 57.566050 82 85  
## 15 4802 36 0 Male 62.475020 88 97  
## 16 4941 46 4 Female 19.014370 69 88  
## 17 4983 33 5 Male 38.392880 102 117  
## 18 5129 26 1 Male 25.045860 77 89  
## 19 5154 35 5 Male 22.190280 82 95  
## 20 5162 33 1 Male 25.018480 118 101  
## 21 5174 38 4 Female 37.270360 87 99  
## 22 5208 31 8 Female 21.377140 97 90  
## 23 5253 29 1 Male 33.133470 104 105  
## 24 5298 30 3 Male 22.956880 87 86  
## 25 5640 34 7 Male 25.998630 93 113  
## 26 5668 27 7 Male 40.922660 72 79  
## 27 5680 17 1 Male 27.756330 84 90  
## 28 5699 26 1 Female 34.223130 95 108  
## 29 5713 36 8 Male 16.268310 89 97  
## 30 5736 18 9 Male 16.147840 89 86  
## 31 5754 36 1 Male 16.336760 87 86  
## 32 5776 26 8 Male 17.127990 71 88  
## 33 6122 29 1 Male 56.210810 95 103  
## 34 6163 21 1 Male 19.359340 112 106  
## 35 6179 22 2 Male 38.012320 89 95  
## 36 6671 30 7 Female 27.805610 71 82  
## 37 6859 27 1 Male 34.212180 74 79  
## 38 6870 22 0 Male 42.483230 84 95  
## 39 6914 43 0 Male 61.522250 85 90  
## 40 6937 18 0 Female 21.190970 94 81  
## 41 6977 30 1 Male 36.210810 97 94  
## 42 7120 39 0 Male 69.705680 84 86  
## 43 7309 31 0 Female 50.666670 85 95  
## 44 7321 23 0 Male 26.004110 84 83  
## 45 7548 31 0 Male 24.366870 108 106  
## 46 2364 41 14 Male 25.809720 84 94  
## 47 2600 3333 9 Male 43.939770 86 80  
## 48 2761 40 3 Female 24.369610 98 112  
## 49 3237 65 9 Male 49.850790 67 67  
## 50 3277 51 1 Male 37.470230 104 96  
## 51 3346 44 18 Female 57.275840 79 85  
## 52 3359 59 9 Female 56.895280 84 91  
## 53 3373 39 28 Female 26.308010 87 91  
## 54 3544 32 14 Male 54.529770 81 98  
## 55 3655 57 5 Female 21.905540 90 103  
## 56 3762 48 6 Male 20.355920 85 93  
## 57 3919 58 1 Male 30.365500 99 95  
## 58 4094 50 2 Male 19.726210 79 93  
## 59 4133 34 14 Male 20.000000 70 88  
## 60 4183 42 3 Male 26.234090 98 116  
## 61 4189 69 4 Female 29.462010 75 86  
## 62 4315 63 0 Male 38.141000 107 130  
## 63 4482 58 14 Female 18.234090 86 103  
## 64 4638 20 17 Male 20.511980 82 72  
## 65 4678 63 7 Male 46.644760 96 95  
## 66 4696 54 4 Male 46.956880 101 112  
## 67 4755 24 18 Male 27.512660 105 102  
## 68 4837 42 10 Male 19.690620 83 88  
## 69 4996 51 12 Male 43.028060 77 78  
## 70 5009 50 7 Male 24.380560 61 104  
## 71 5014 46 7 Female 23.761810 75 90  
## 72 5192 60 1 Male 58.628340 87 97  
## 73 5204 71 0 Male 59.074610 97 107  
## 74 5238 44 3 Male 45.100620 99 103  
## 75 5280 83 1 Male 48.643390 78 88  
## 76 5289 52 1 Male 48.572210 84 85  
## 77 5456 48 14 Male 41.163590 80 101  
## 78 5458 44 14 Male 34.477750 84 95  
## 79 5474 65 2 Female 28.659820 95 86  
## 80 5568 64 1 Female 51.991790 75 79  
## 81 5580 56 7 Male 17.793290 86 95  
## 82 5581 65 2 Male 26.305270 85 95  
## 83 5628 51 3 Female 30.264200 81 85  
## 84 6154 43 5 Female 22.606430 74 80  
## 85 6180 59 12 Male 20.720050 67 84  
## 86 6314 58 3 Male 16.692680 80 99  
## 87 6340 71 0 Male 19.323750 76 72  
## 88 6564 69 0 Male 34.499660 67 74  
## 89 6614 57 0 Male 45.111570 80 101  
## 90 6686 44 14 Female 38.349080 90 100  
## 91 6795 55 0 Male 30.715950 87 104  
## 92 7080 64 5 Female 76.659820 76 106  
## 93 7084 54 2 Male 36.572210 87 93  
## 94 7271 55 0 Male 41.765910 100 95  
## 95 7371 55 1 Male 56.785760 80 88  
## 96 2569 49 35 Male 18.715950 50 101  
## 97 3058 56 28 Male 22.253250 65 75  
## 98 3645 43 45 Male 27.493500 72 90  
## 99 3844 73 9 Male 26.116360 79 94  
## 100 4725 124 10 Male 32.917180 93 97  
## 101 4744 65 25 Male 57.566050 105 119  
## 102 4807 64 14 Female 47.797400 74 74  
## 103 4892 62 21 Male 22.039700 76 88  
## 104 4962 63 1 Female 25.196440 69 67  
## 105 5125 78 12 Male 17.538670 94 118  
## 106 5222 63 30 Male 22.529770 77 85  
## 107 5253 86 1 Male 33.133470 106 128  
## 108 5386 78 21 Male 20.876110 78 93  
## 109 5534 87 14 Male 29.262150 75 82  
## 110 5712 88 14 Male 22.269680 70 68  
## 111 5837 82 1 Female 33.308690 82 110  
## 112 5879 75 21 Male 25.845310 80 105  
## 113 5893 71 21 Male 22.811770 65 90  
## 114 5916 84 0 Female 26.855580 93 73  
## 115 6410 80 14 Male 32.172480 85 98  
## 116 7173 84 4 Male 24.980150 72 75  
## 117 7221 98 0 Male 63.504450 74 79  
## 118 2453 120 10 Male 37.275840 63 99  
## 119 2653 97 28 Male 30.006840 93 112  
## 120 4218 82 28 Male 25.990420 74 92  
## 121 4542 121 11 Female 21.957560 86 114  
## 122 4902 102 8 Male 16.142370 87 77  
## 123 4933 134 0 Male 18.455850 69 83  
## 124 4941 131 4 Female 19.014370 96 96  
## 125 5085 117 2 Male 49.026690 67 71  
## 126 5111 107 7 Male 21.694730 71 80  
## 127 5154 120 5 Male 22.190280 89 109  
## 128 5222 93 30 Male 22.529770 77 91  
## 129 5298 107 3 Male 22.956880 117 112  
## 130 5339 119 7 Male 21.815200 87 82  
## 131 5387 109 12 Male 21.798770 85 112  
## 132 5414 105 10 Female 40.276520 93 104  
## 133 5494 111 7 Male 54.691310 86 86  
## 134 5896 126 4 Female 26.877480 50 74  
## 135 5901 115 7 Male 22.173850 112 116  
## 136 6135 96 18 Male 26.562630 66 105  
## 137 6173 125 4 Male 35.304590 94 97  
## 138 6214 112 0 Male 60.317590 65 74  
## 139 6253 128 0 Female 46.403830 104 112  
## 140 6433 120 4 Male 23.860370 100 103  
## 141 6665 119 3 Female 23.017110 106 94  
## 142 6834 123 0 Male 30.748800 72 75  
## 143 1176 146 17 Female 19.728950 65 98  
## 144 2849 151 0 Male 20.087610 51 86  
## 145 2882 141 18 Male 19.233400 84 85  
## 146 3051 131 13 Male 37.240250 68 79  
## 147 3728 151 6 Male 30.127310 96 105  
## 148 3913 96 42 Female 23.923340 56 80  
## 149 4133 133 14 Male 20.000000 82 94  
## 150 4661 135 17 Female 30.841890 84 93  
## 151 4678 143 7 Male 46.644760 98 107  
## 152 4696 150 4 Male 46.956880 120 120  
## 153 4705 146 1 Female 21.683780 133 111  
## 154 4802 142 0 Male 62.475020 101 117  
## 155 4807 139 14 Female 47.797400 80 78  
## 156 4983 146 5 Male 38.392880 107 123  
## 157 5014 151 7 Female 23.761810 97 110  
## 158 5162 144 1 Male 25.018480 130 118  
## 159 5238 150 3 Male 45.100620 117 126  
## 160 5642 162 0 Male 65.869950 89 103  
## 161 5699 138 1 Female 34.223130 110 107  
## 162 5713 144 8 Male 16.268310 100 99  
## 163 5804 159 2 Female 28.851470 102 107  
## 164 5818 125 14 Male 34.926760 72 91  
## 165 6314 140 3 Male 16.692680 87 96  
## 166 6664 164 2 Male 24.733740 66 73  
## 167 1048 85 94 Male 20.114990 63 82  
## 168 1085 159 11 Male 30.710470 103 97  
## 169 3237 189 9 Male 49.850790 79 82  
## 170 3358 175 4 Male 20.670770 97 97  
## 171 3808 165 7 Male 28.268310 94 111  
## 172 4094 177 2 Male 19.726210 89 102  
## 173 4253 175 3 Male 22.603700 114 118  
## 174 4638 140 17 Male 20.511980 89 78  
## 175 4755 128 18 Male 27.512660 105 109  
## 176 4865 142 35 Male 58.335390 84 103  
## 177 4892 148 21 Male 22.039700 106 110  
## 178 5009 174 7 Male 24.380560 77 103  
## 179 5111 177 7 Male 21.694730 72 81  
## 180 5125 173 12 Male 17.538670 106 119  
## 181 5192 179 1 Male 58.628340 93 105  
## 182 5505 171 1 Male 65.478440 95 93  
## 183 5581 176 2 Male 26.305270 96 110  
## 184 5599 148 21 Male 18.748800 72 81  
## 185 5680 184 1 Male 27.756330 84 90  
## 186 5782 108 68 Female 19.671460 69 85  
## 187 6180 177 12 Male 20.720050 81 94  
## 188 6671 184 7 Female 27.805610 91 92  
## 189 2124 173 30 Male 30.762490 76 106  
## 190 2646 187 14 Male 22.915810 97 97  
## 191 2790 211 0 Male 48.804930 89 99  
## 192 4189 202 4 Female 29.462010 81 90  
## 193 4775 180 28 Male 53.555100 70 86  
## 194 4933 226 0 Male 18.455850 79 86  
## 195 4962 210 1 Female 25.196440 71 70  
## 196 5208 193 8 Female 21.377140 133 111  
## 197 5456 193 14 Male 41.163590 87 110  
## 198 5668 219 7 Male 40.922660 76 90  
## 199 5712 192 14 Male 22.269680 87 85  
## 200 5893 200 21 Male 22.811770 65 89  
## 201 5916 205 0 Female 26.855580 92 76  
## 202 6122 212 1 Male 56.210810 109 117  
## 203 6136 216 1 Male 32.791240 92 89  
## 204 6175 278 1 Male 51.170430 99 98  
## 205 6228 174 3 Female 31.553730 114 108  
## 206 7173 210 4 Male 24.980150 79 78  
## 207 1176 216 17 Female 19.728950 74 100  
## 208 3467 186 42 Male 25.393570 53 69  
## 209 4744 217 25 Male 57.566050 108 118  
## 210 5386 241 21 Male 20.876110 80 94  
## 211 5837 242 1 Female 33.308690 93 105  
## 212 6247 228 13 Male 42.316220 77 80  
## 213 1892 276 2 Male 21.779600 87 107  
## 214 2882 262 18 Male 19.233400 94 90  
## 215 3058 236 28 Male 22.253250 85 88  
## 216 4342 263 1 Male 44.062970 79 91  
## 217 4865 240 35 Male 58.335390 93 105  
## 218 5085 269 2 Male 49.026690 65 77  
## 219 5222 247 30 Male 22.529770 88 85  
## 220 5339 271 7 Male 21.815200 94 89  
## 221 5474 280 2 Female 28.659820 99 91  
## 222 5600 232 0 Male 48.788500 75 81  
## 223 2826 290 14 Male 23.233400 94 108  
## 224 4725 286 10 Male 32.917180 105 94  
## 225 5204 299 0 Male 59.074610 99 105  
## 226 6498 270 28 Male 24.076660 82 101  
## 227 2081 185 43 Male 17.697470 77 97  
## 228 4678 340 7 Male 46.644760 108 119  
## 229 5397 328 0 Female 62.798080 121 108  
## 230 6214 318 0 Male 60.317590 78 82  
## 231 7034 280 60 Male 23.137580 78 80  
## 232 1493 453 60 Male 17.804240 59 81  
## 233 1836 375 1 Male 47.055440 101 108  
## 234 1939 295 130 Male 28.273790 67 117  
## 235 2646 438 14 Male 22.915810 98 94  
## 236 2653 352 28 Male 30.006840 105 126  
## 237 3226 444 0 Male 27.455170 76 64  
## 238 3467 333 42 Male 25.393570 68 74  
## 239 4342 432 1 Male 44.062970 92 107  
## 240 4542 431 11 Female 21.957560 98 114  
## 241 4661 374 17 Female 30.841890 93 95  
## 242 4902 397 8 Male 16.142370 92 86  
## 243 4983 398 5 Male 38.392880 121 132  
## 244 5111 442 7 Male 21.694730 77 86  
## 245 5125 510 12 Male 17.538670 112 125  
## 246 5289 417 1 Male 48.572210 83 83  
## 247 5386 436 21 Male 20.876110 90 103  
## 248 5387 480 12 Male 21.798770 94 116  
## 249 5505 527 1 Male 65.478440 104 87  
## 250 5580 369 7 Male 17.793290 96 107  
## 251 5581 378 2 Male 26.305270 95 95  
## 252 5599 443 21 Male 18.748800 78 80  
## 253 5668 390 7 Male 40.922660 92 92  
## 254 5680 403 1 Male 27.756330 94 93  
## 255 5712 365 14 Male 22.269680 98 86  
## 256 5772 412 35 Male 26.258730 102 104  
## 257 5804 354 2 Female 28.851470 122 105  
## 258 5811 431 25 Male 80.032850 78 80  
## 259 5841 415 8 Male 27.227930 82 83  
## 260 6226 438 0 Male 36.802190 84 92  
## 261 6247 389 13 Male 42.316220 82 80  
## 262 6468 513 60 Male 43.479810 99 94  
## 263 6614 362 0 Male 45.111570 88 106  
## 264 6665 368 3 Female 23.017110 100 92  
## 265 781 714 15 Male 29.869950 85 85  
## 266 1048 576 94 Male 20.114990 91 96  
## 267 1157 810 23 Male 17.388090 97 84  
## 268 1493 684 60 Male 17.804240 66 75  
## 269 1611 511 60 Male 23.279950 69 107  
## 270 1624 604 1 Male 19.561940 97 85  
## 271 1939 562 130 Male 28.273790 85 111  
## 272 2498 615 0 Female 17.429160 86 113  
## 273 2826 636 14 Male 23.233400 111 101  
## 274 2849 642 0 Male 20.087610 76 98  
## 275 3032 525 20 Male 16.939080 79 87  
## 276 3226 683 0 Male 27.455170 89 78  
## 277 4218 814 28 Male 25.990420 99 96  
## 278 4807 532 14 Female 47.797400 84 82  
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## 13 4705 18 1 Female 21.683780 127 109  
## 14 4744 15 25 Male 57.566050 82 85  
## 15 4802 36 0 Male 62.475020 88 97  
## 16 4941 46 4 Female 19.014370 69 88  
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## 18 5129 26 1 Male 25.045860 77 89  
## 19 5154 35 5 Male 22.190280 82 95  
## 20 5162 33 1 Male 25.018480 118 101  
## 21 5174 38 4 Female 37.270360 87 99  
## 22 5208 31 8 Female 21.377140 97 90  
## 23 5253 29 1 Male 33.133470 104 105  
## 24 5298 30 3 Male 22.956880 87 86  
## 25 5640 34 7 Male 25.998630 93 113  
## 26 5668 27 7 Male 40.922660 72 79  
## 27 5680 17 1 Male 27.756330 84 90  
## 28 5699 26 1 Female 34.223130 95 108  
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### References

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