## referees-cpmr

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```
## Installing package into '/Users/runner/work/_temp/Library'
## (as 'lib' is unspecified)
##
## The downloaded binary packages are in
## /var/folders/24/8k48j16d249_n_qfxws16xvm0000gn/T//RtmptqdJ31/downloaded_packages
## -- Attaching packages ------ tidyverse 1.3.2 --
## v ggplot2 3.3.6 v purrr 0.3.4
## v tibble 3.1.8 v dplyr 1.0.9
## v tidyr 1.2.0 v stringr 1.4.0
## v readr 2.1.2 v forcats 0.5.1
## -- Conflicts ----- tidyverse conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag() masks stats::lag()
raw_data <- read.csv("../scraped-data/referees.csv")</pre>
raw_data <- as_tibble(raw_data)</pre>
head(raw_data)
## # A tibble: 6 x 4
    Referee Matches Red.cards Yellow.cards
##
    <chr>
                  <int> <int> <int>
## 1 Peter Bankes 1
## 2 Jarred Gillett 1
                             0
                                             6
                               0
                                             0
                               0
## 3 Simon Hooper
                      1
                                             3
## 4 Robert Jones
                      1
                               0
                                0
                                             2
## 5 Andy Madley
                      1
## 6 Andre Marriner
                      1
raw_columns <- raw_data %>% select(Referee, Matches, Yellow.cards)
head(raw_columns)
## # A tibble: 6 x 3
##
    Referee Matches Yellow.cards
                  <int> <int>
    <chr>
## 1 Peter Bankes 1
                      1
## 2 Jarred Gillett
                                   0
## 3 Simon Hooper
                                    3
## 4 Robert Jones
                                   2
                      1
## 5 Andy Madley
## 6 Andre Marriner
                                    3
```

```
new_table <- raw_columns %>% mutate(yellow_card_ratio = Yellow.cards / Matches)
new_table <- new_table[order(-new_table$yellow_card_ratio),]</pre>
head(new_table)
## # A tibble: 6 x 4
##
   Referee Matches Yellow.cards yellow_card_ratio
##
    <chr>
                     <int>
                              <int>
## 1 Peter Bankes
                        1
                                      6
                                                       6
                                      5
                                                       5
## 2 Craig Pawson
## 3 Paul Tierney
                        1
                                      5
                                                       5
## 4 Simon Hooper
                                      3
                                                       3
                         1
## 5 Andre Marriner
                                      3
                                                       3
                         1
## 6 Anthony Taylor
                                      3
                                                       3
data <- new_table %>% select(Referee, yellow_card_ratio)
head(data)
## # A tibble: 6 x 2
## Referee yellow_card_ratio
##
    <chr>
                             <dbl>
## 1 Peter Bankes
                                   6
## 2 Craig Pawson
                                   5
## 3 Paul Tierney
                                   5
                                   3
## 4 Simon Hooper
                                   3
## 5 Andre Marriner
## 6 Anthony Taylor
                                   3
```

write.csv(data, "../cleaned-data/referees-cpmr.csv", row.names = FALSE)