

# referees-cpmr

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2022-08-17

```
## Installing package into '/Users/runner/work/_temp/Library'
## (as 'lib' is unspecified)

##
##   There is a binary version available but the source version is later:
##         binary source needs_compilation
## rmarkdown   2.14   2.15                 FALSE

## installing the source package 'rmarkdown'

## -- 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")
raw_data <- as_tibble(raw_data)
```

```
head(raw_data)
```

```
## # A tibble: 6 x 4
##   Referee      Matches Red.cards Yellow.cards
##   <chr>         <int>   <int>       <int>
## 1 Robert Jones      2       0         7
## 2 Michael Oliver    2       0         6
## 3 Anthony Taylor    2       2         8
## 4 Paul Tierney      2       1        11
## 5 Stuart Attwell    1       0         4
## 6 Peter Bankes      1       0         6
```

```
raw_columns <- raw_data %>% select(Referee, Matches, Yellow.cards)
head(raw_columns)
```

```
## # A tibble: 6 x 3
##   Referee      Matches Yellow.cards
##   <chr>         <int>       <int>
```

```
## 1 Robert Jones      2      7
## 2 Michael Oliver    2      6
## 3 Anthony Taylor    2      8
## 4 Paul Tierney      2     11
## 5 Stuart Attwell    1      4
## 6 Peter Bankes      1      6
```

```
new_table <- raw_columns %>% mutate(yellow_card_ratio = Yellow.cards / Matches)
new_table <- new_table[order(-new_table$yellow_card_ratio),]
head(new_table)
```

```
## # A tibble: 6 x 4
##   Referee      Matches Yellow.cards yellow_card_ratio
##   <chr>         <int>     <int>         <dbl>
## 1 Peter Bankes      1         6           6
## 2 John Brooks       1         6           6
## 3 Paul Tierney      2        11          5.5
## 4 Craig Pawson       1         5           5
## 5 Graham Scott       1         5           5
## 6 Anthony Taylor    2         8           4
```

```
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 John Brooks       6
## 3 Paul Tierney     5.5
## 4 Craig Pawson       5
## 5 Graham Scott       5
## 6 Anthony Taylor    4
```

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