NHL API playground

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```
library(httr)
library(jsonlite)
library(ggplot2)
library(tidyr)
library(dplyr)
```

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

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

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

```
library(purrr)
```

```
##
## Attaching package: 'purrr'
```

```
## The following object is masked from 'package:jsonlite':
##
##     flatten
```

Get data

```
player_stats_NHL <- function(playerIDs){
  # This function accepts player IDs and output career stats
  # Args: playerIDs: Vector of Players IDS
  # output: Dataframe of player career stats

  #This defines URL for API
  base_url <- "https://statsapi.web.nhl.com/api/v1/people/"
  end_points <- "?expand=person.stats&stats=careerRegularSeason&expand=stats.team&site=en_nhl"

  #initialize empty dataframe for results
  ovr_stats <- data.frame()

  for(i in 1:length(playerIDs)){
    #Fetch data
    url_playa <- paste0(base_url,playerIDs[i],end_points)
    play_data <- GET(url_playa)
    play_df <- fromJSON(content(play_data,"text"))

    # Extract data from mind-numbingly nested dataframe. Check if the level of nestedness
```

```
    # can be found out programatically
    play_stats <- as.data.frame(play_df$people$stats)
    play_stats <- as.data.frame(play_stats$splits)$stat
    play_stats <- cbind(Name = play_df$people$fullName,play_stats)

    if(i == 1){
      ovr_stats <- play_stats
    }else{
      ovr_stats <- rbind(ovr_stats,play_stats)
    }

  }
  return(ovr_stats)
}
```

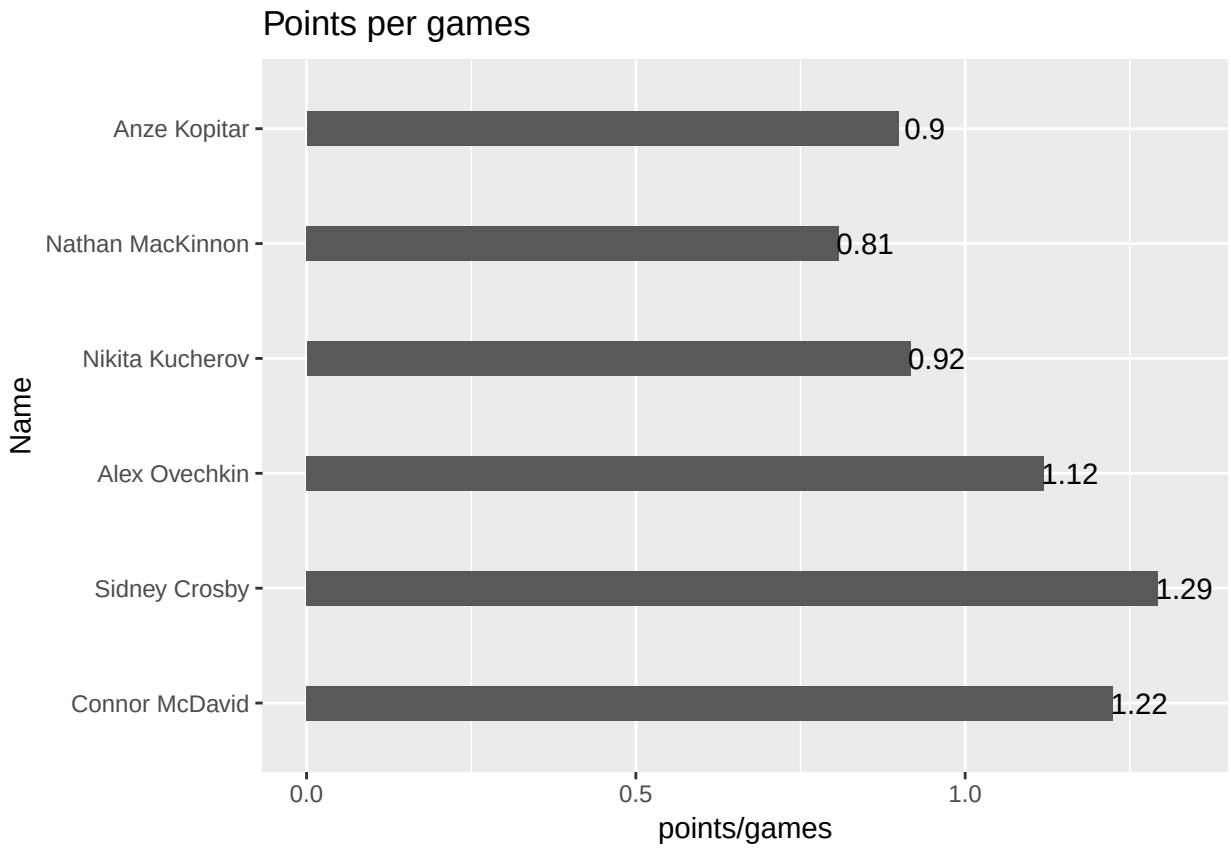
Using API

To obtain player ID - Go to NHL.com and search for player name. In the URL the last 7 numbers indicate player ID. Copy that into the function argument.

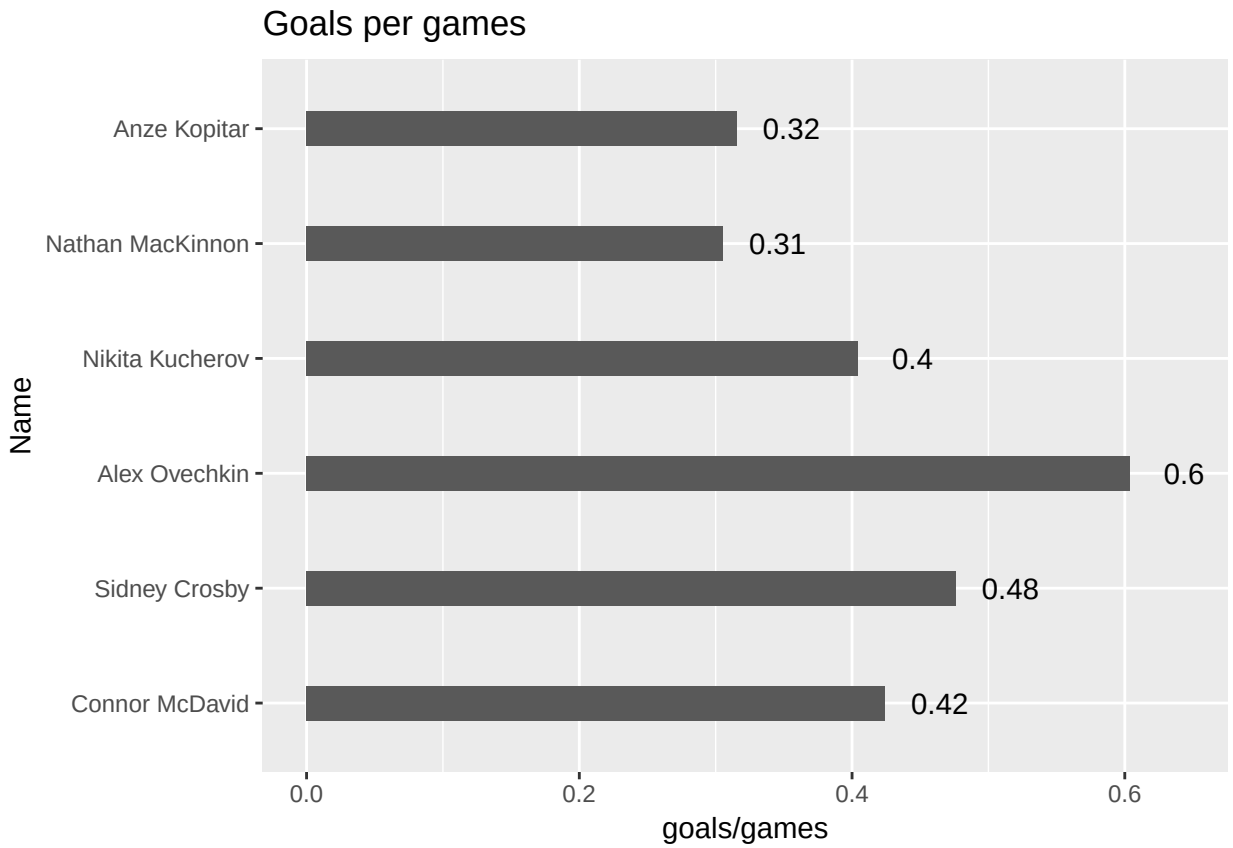
```
player_op <- player_stats_NHL(c(8478402,8471675,8471214,8476453,8477492,8471685))
```

Comparing goals and assists per game

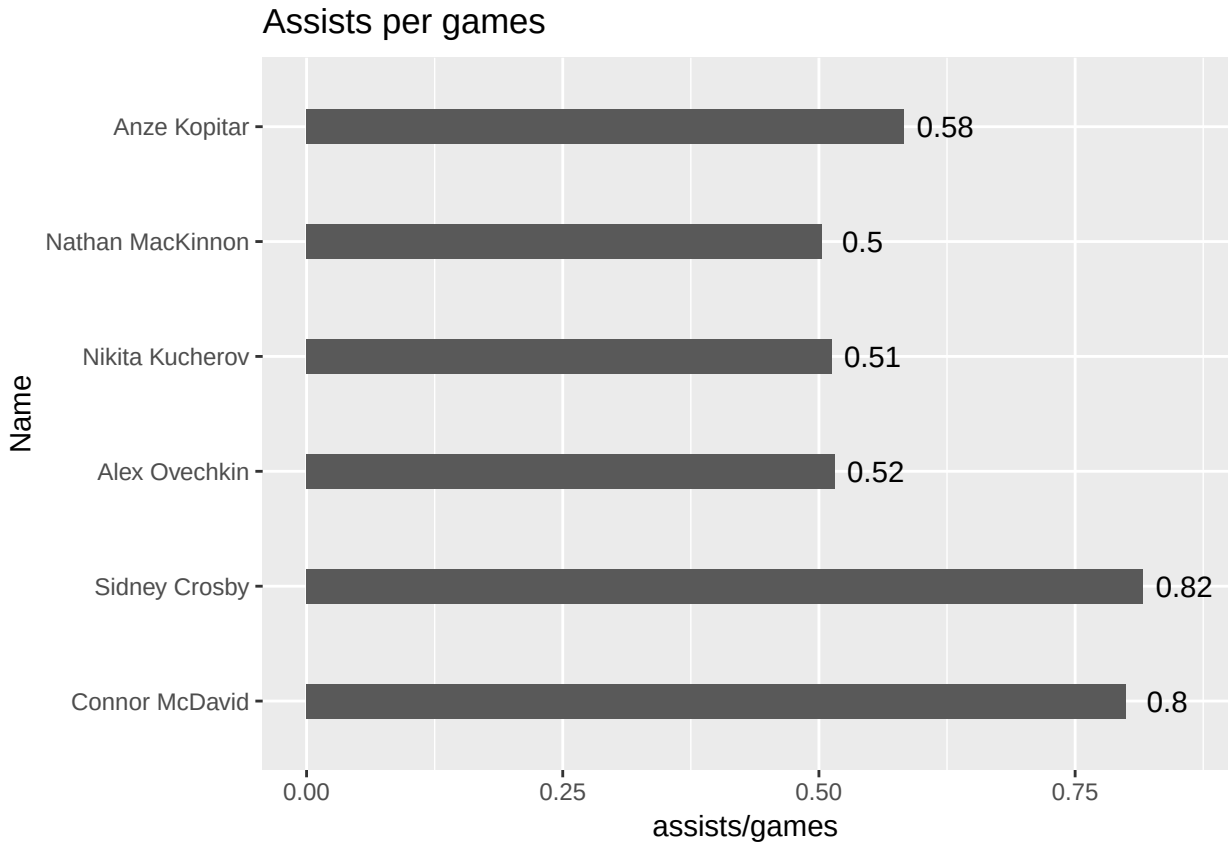
```
ggplot(player_op) +
  geom_col(aes(x = Name,y = points/games),width = 0.3) +
  geom_text(aes(x = Name,y = points/games + 0.04 ,label = round(points/games,2))) +
  coord_flip() +
  labs(title = "Points per games")
```




```
ggplot(player_op) +
  geom_col(aes(x = Name,y = goals/games),width = 0.3) +
  geom_text(aes(x = Name,y = goals/games + 0.04 ,label = round(goals/games,2))) +
  coord_flip() +
  labs(title = "Goals per games")
```




```
ggplot(player_op) +
  geom_col(aes(x = Name,y = assists/games),width = 0.3) +
  geom_text(aes(x = Name,y = assists/games + 0.04 ,label = round(assists/games,2))) +
  coord_flip()+
  labs(title = "Assists per games")
```


Assists per games
Anze Kopitar
Nathan MacKinnon
Nikita Kucherov
Alex Ovechkin
Sidney Crosby
Connor McDavid
0.58
0.5
0.51
0.52
0.82
0.8
Name
0.00
0.25
0.50
0.75
assists/games