WBB PBP Analysis

December 21, 2022

```
#points scored on a possession minus the average points per possession for each game (summed per player
#players with a positive number lead to high value possessions when they shoot
#players with a negative number lead to low value possessions when they shoot
pbp %>%
  group_by(date) %>%
  filter(action == "GOOD" | action == "MISS") %>%
  mutate(points_scored = ifelse(action == "GOOD" & type == "LAYUP", 2, 0),
         points_scored = ifelse(action == "GOOD" & type == "JUMPER", 2, points_scored),
         points_scored = ifelse(action == "GOOD" & type == "3PTR", 3, points_scored),
         points_scored = ifelse(action == "GOOD" & type == "LAYUP", 2, points_scored),
         points_scored = ifelse(action == "GOOD" & type == "FT", 1, points_scored),
         possession = 1,
         total_game_points = sum(points_scored),
         total_game_possessions = sum(possession),
         exp_pos_pts = total_game_points/total_game_possessions,
         pts_over_exp = points_scored - exp_pos_pts) %>%
  ungroup() %>%
  group_by(checkname52) %>%
  summarise(total_points_added = sum(pts_over_exp),
            points_added_per = total_points_added/n()) %>%
  arrange(-points_added_per)
```

```
## # A tibble: 10 x 3
##    checkname52      total_points_added points_added_per
##    <chr>                         <dbl>            <dbl>
##  1 HEGLAND,GRACE                 14.1            0.205
##  2 BOTTEN,CAYDEN                  3.36           0.135
##  3 KELLY,RACHEL                  11.5            0.124
##  4 OLMEN,SOPHIE                   4.75           0.0779
##  5 YAGODINSKI,PAIGE               4.44           0.0511
##  6 TANGEN,SARAH                  -4.52          -0.146
##  7 FIX,CASSIE                   -17.8           -0.259
##  8 HOWDESHELL,SARAH              -3.33          -0.416
##  9 ZHEN,ZILING                   -5.99          -0.544
## 10 KORMANN,SOPHIA                -6.54          -0.654
```

```
#same table as above, but by quarter
quarter_max <- pbp %>%
  group_by(date) %>%
  filter(action == "GOOD" | action == "MISS") %>%
  mutate(points_scored = ifelse(action == "GOOD" & type == "LAYUP", 2, 0),
         points_scored = ifelse(action == "GOOD" & type == "JUMPER", 2, points_scored),
         points_scored = ifelse(action == "GOOD" & type == "3PTR", 3, points_scored),
         points_scored = ifelse(action == "GOOD" & type == "LAYUP", 2, points_scored),
```

```
        points_scored = ifelse(action == "GOOD" & type == "FT", 1, points_scored),
        possession = 1,
        total_game_points = sum(points_scored),
        total_game_possessions = sum(possession),
        exp_pos_pts = total_game_points/total_game_possessions,
        pts_over_exp = points_scored - exp_pos_pts) %>%
  ungroup() %>%
  group_by(checkname52, quarter) %>%
  summarise(points_added = sum(pts_over_exp)) %>%
  arrange(quarter, -points_added)
```

```
## `summarise()` has grouped output by 'checkname52'. You can override using the
## `.groups` argument.
```

```
pbp %>%
  filter(checkname52 != "TEAM") %>%
  filter(action == "ASSIST" | action == "TURNOVER") %>%
  group_by(checkname52) %>%
  summarise(assists = sum(action == "ASSIST"),
            turnovers = sum(action == "TURNOVER"),
            `a/t` = assists/turnovers) %>%
  arrange(-`a/t`)
```

```
## # A tibble: 10 x 4
##    checkname52      assists turnovers   `a/t`
##    <chr>              <int>     <int>   <dbl>
##  1 HOWDESHELL,SARAH       4         0 Inf
##  2 FIX,CASSIE            18        18   1
##  3 YAGODINSKI,PAIGE      19        20   0.95
##  4 OLMEN,SOPHIE          11        12   0.917
##  5 KELLY,RACHEL          13        34   0.382
##  6 HEGLAND,GRACE          9        25   0.36
##  7 ZHEN,ZILING            2         8   0.25
##  8 BOTTEN,CAYDEN          1         8   0.125
##  9 TANGEN,SARAH           1         9   0.111
## 10 KORMANN,SOPHIA         0         2   0
```

```
#pbp %>%
  #filter(action == "TURNOVER" | action == "ASSIST") %>%
```

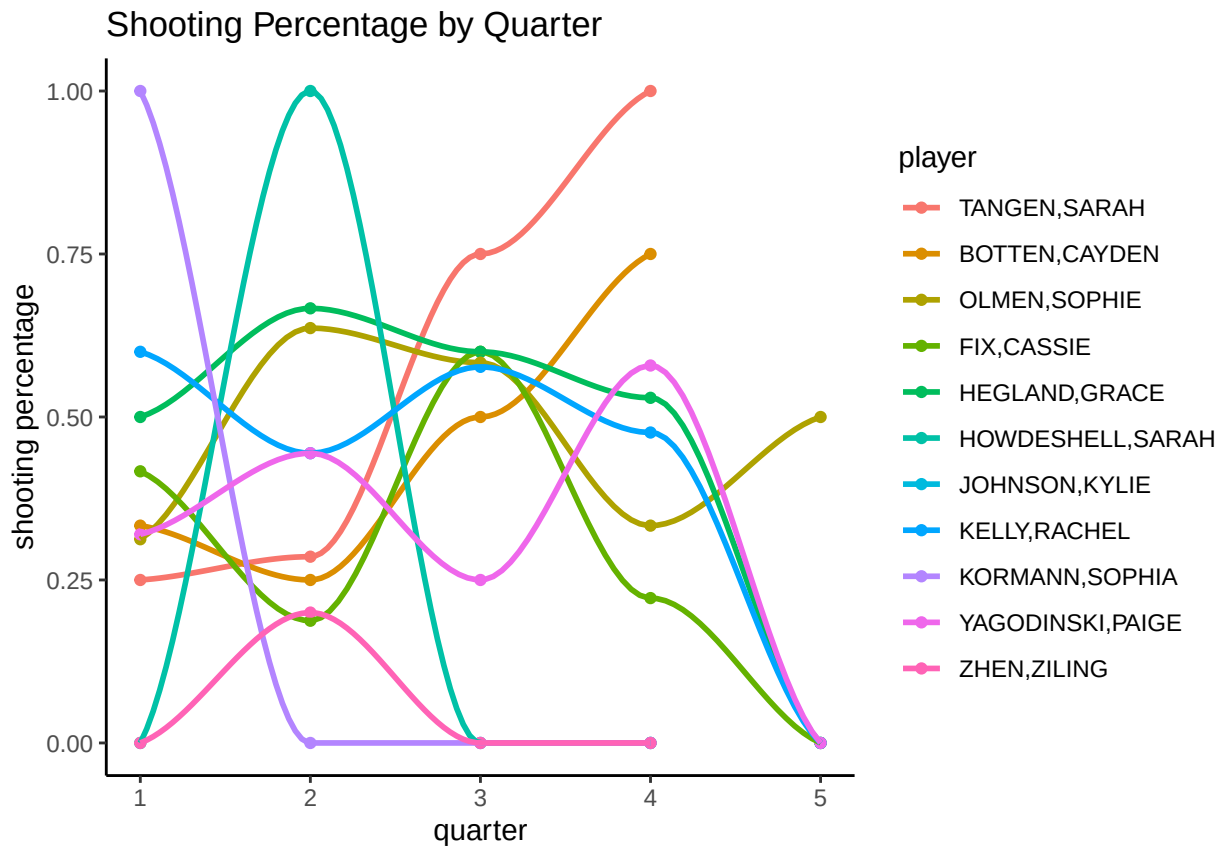
```
shooting_by_quarter <- pbp %>%
  filter(checkname52 != "TEAM") %>%
  filter(type != "FT") %>%
  group_by(checkname52, quarter) %>%
  mutate(points = ifelse(action == "GOOD" & type == "LAYUP", 2, 0),
         points = ifelse(action == "GOOD" & type == "JUMPER", 2, points),
         points = ifelse(action == "GOOD" & type == "3PTR", 3, points),
         points = ifelse(action == "GOOD" & type == "LAYUP", 2, points),
         points = ifelse(action == "GOOD" & type == "FT", 1, points)) %>%
  summarise(total_points = sum(points),
            shots = sum(action == "GOOD") + sum(action == "MISS"),
            shooting_pct = sum(action == "GOOD")/
```

```
            (sum(action == "GOOD") + sum(action == "MISS")),
          shooting_pct = ifelse(is.na(shooting_pct), 0, shooting_pct))
```

```
## `summarise()` has grouped output by 'checkname52'. You can override using the
## `.groups` argument.
```

```
ggplot(data = shooting_by_quarter,
       aes(x = quarter,
           y = shooting_pct,
           color = fct_reorder2(checkname52, quarter, shooting_pct))) +
  geom_point() +
  #geom_line() +
  geom_smooth(se = FALSE) +
  labs(title = "Shooting Percentage by Quarter",
       y = "shooting percentage",
       color = "player") +
  theme_classic()
```

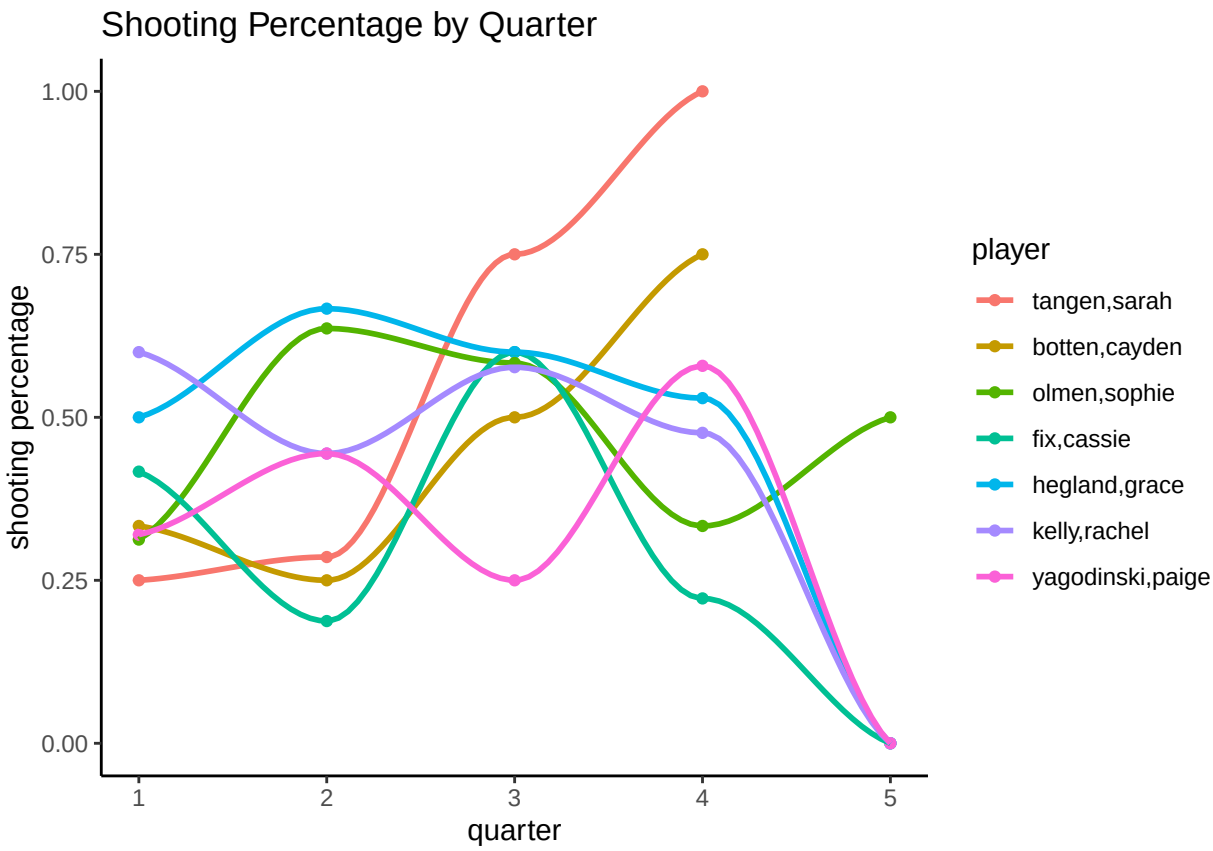
```
## `geom_smooth()` using method = 'loess' and formula 'y ~ x'
```




```
shooting_by_quarter <- shooting_by_quarter %>%
  mutate(checkname52 = tolower(checkname52))
```

```
#filter out players with low volume to make it neater
shooting_by_quarter2 <- shooting_by_quarter %>%
  filter(checkname52 != "johnson,kylie", checkname52 != "howdeshell,sarah", checkname52 != "kormann,sopl

ggplot(data = shooting_by_quarter2,
       aes(x = quarter,
           y = shooting_pct,
           color = fct_reorder2(checkname52, quarter, shooting_pct))) +
  geom_point() +
  #geom_line() +
  geom_smooth(se = FALSE) +
  labs(title = "Shooting Percentage by Quarter",
       y = "shooting percentage",
       color = "player") +
  theme_classic()
```

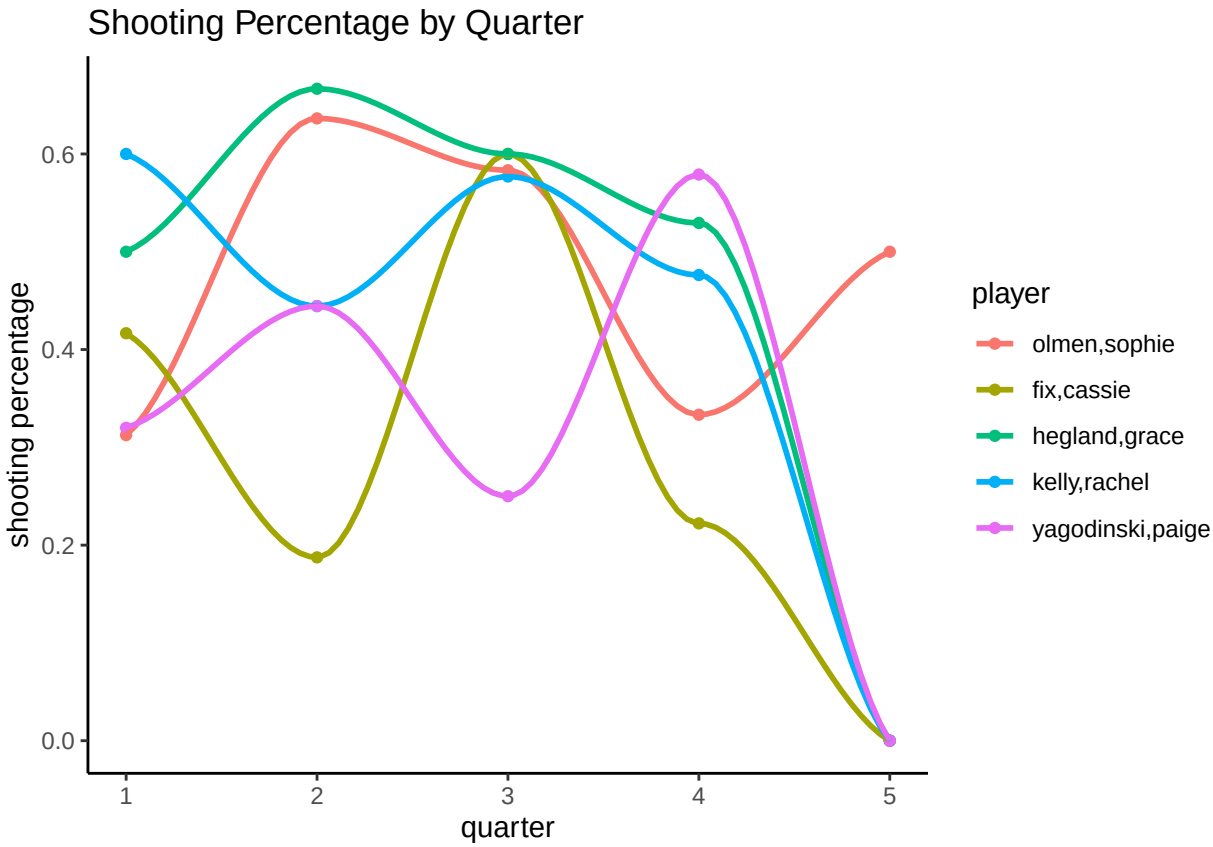
```
## `geom_smooth()` using method = 'loess' and formula 'y ~ x'
```




```
#just starters
shooting_by_quarter3 <- shooting_by_quarter2 %>%
  filter(checkname52 != "tangen,sarah", checkname52 != "botten,cayden")

#just starters
ggplot(data = shooting_by_quarter3,
       aes(x = quarter,
```

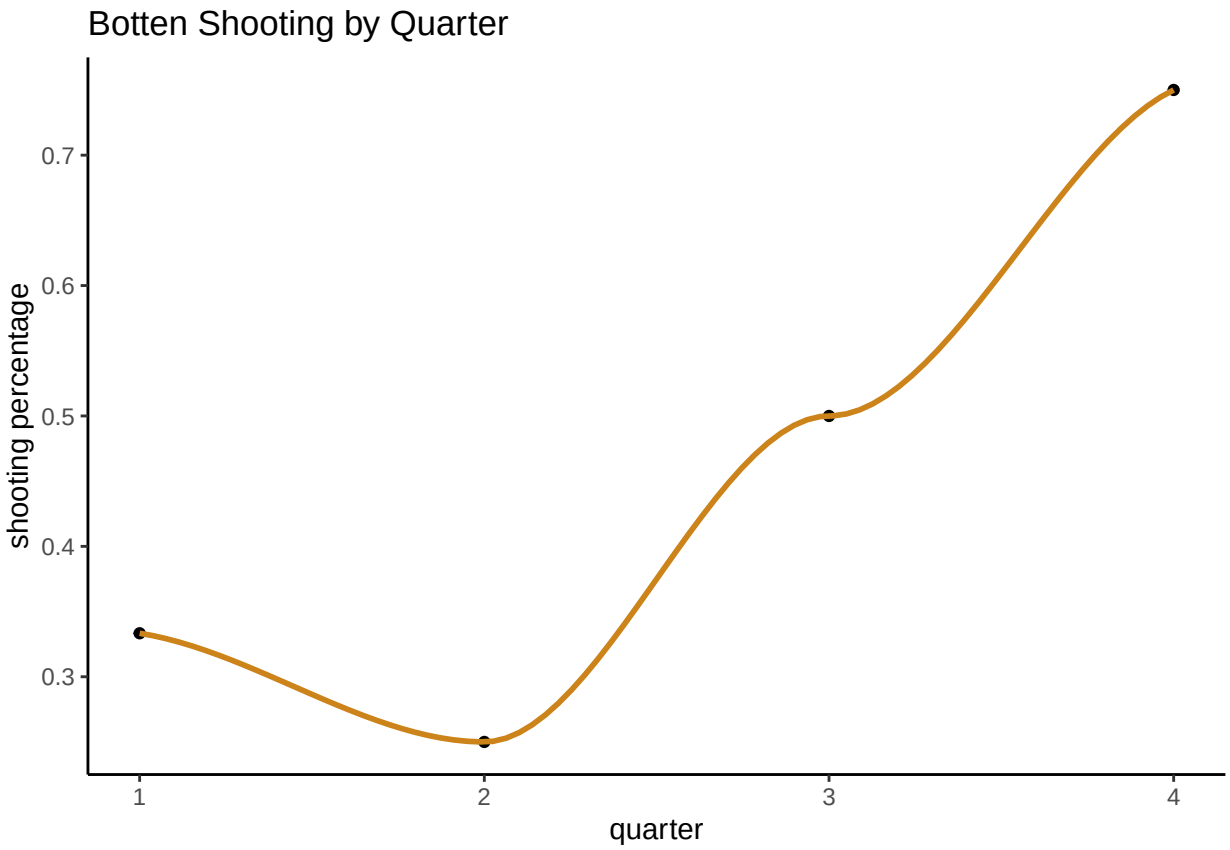
```
          y = shooting_pct,
          color = fct_reorder2(checkname52, quarter, shooting_pct))) +
  geom_point() +
  #geom_line() +
  geom_smooth(se = FALSE) +
  labs(title = "Shooting Percentage by Quarter",
       y = "shooting percentage",
       color = "player") +
  theme_classic()
```

```
## `geom_smooth()` using method = 'loess' and formula 'y ~ x'
```



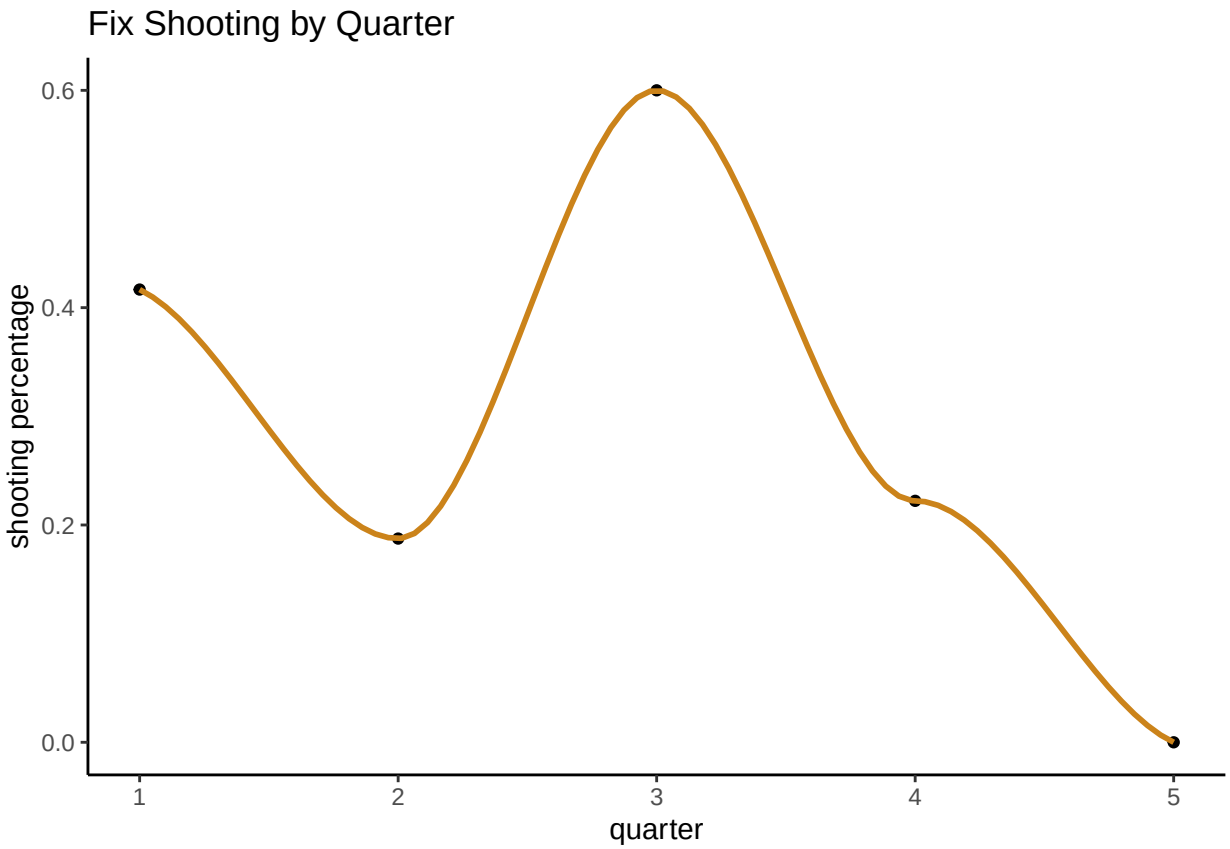

```
quarterly_shooting <- function(player){
  shooting_by_quarter %>%
    filter(str_detect(checkname52, {{player}})) %>%
    ggplot(aes(x = quarter, y = shooting_pct)) +
    geom_point() +
    geom_smooth(color = "#CB831A") +
    labs(title = str_c(str_to_title({{player}}), " Shooting by Quarter"),
         y = "shooting percentage") +
    theme_classic()
}

quarterly_shooting("botten")
```

```
## `geom_smooth()` using method = 'loess' and formula 'y ~ x'
```



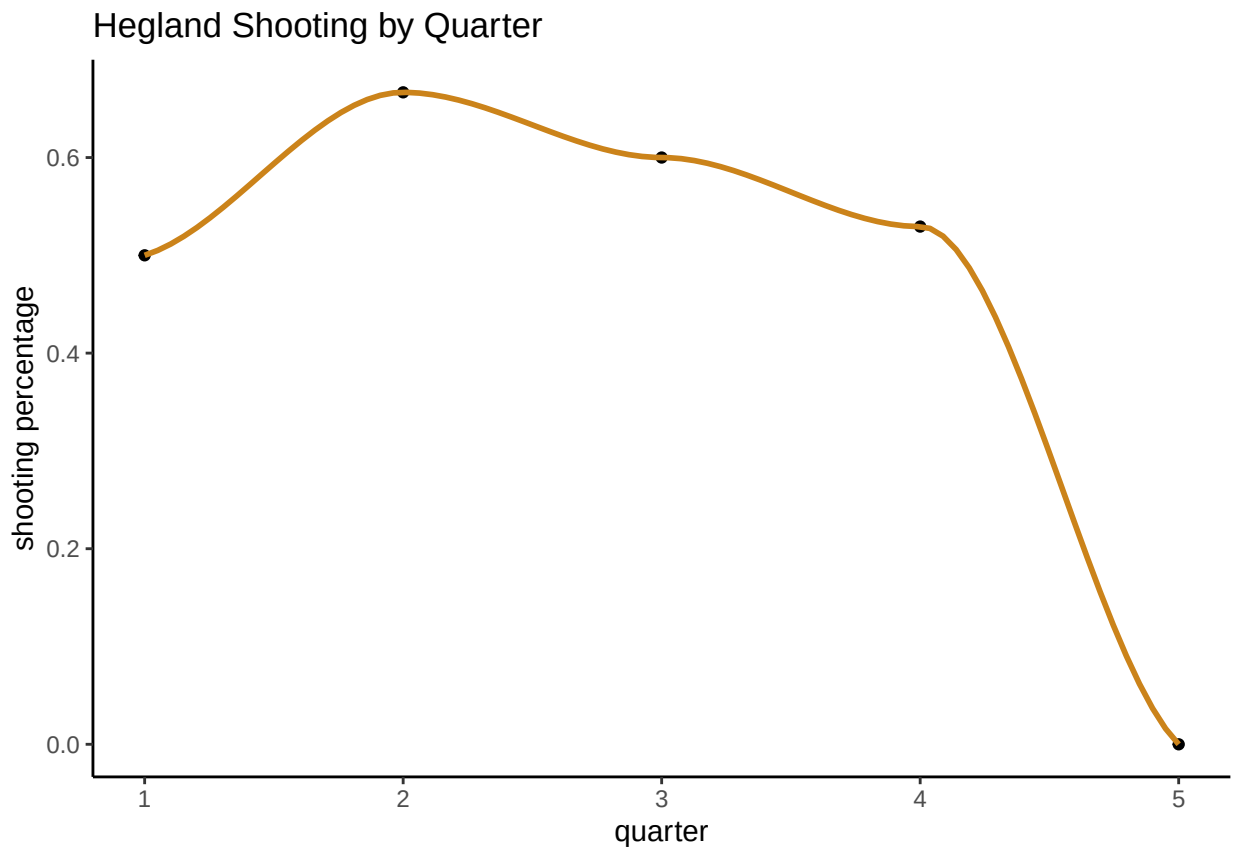

```
quarterly_shooting("fix")
```

```
## `geom_smooth()` using method = 'loess' and formula 'y ~ x'
```



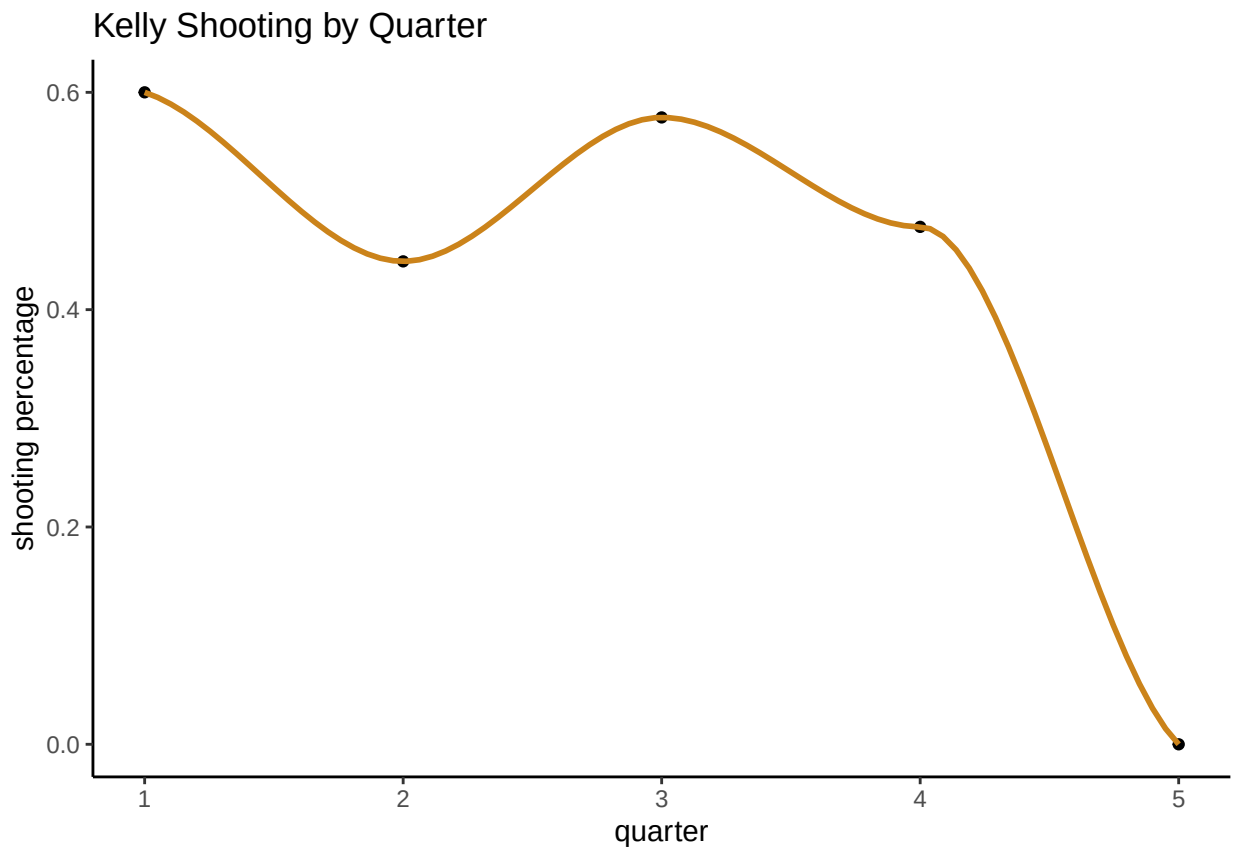

```
quarterly_shooting("hegland")
```

```
## `geom_smooth()` using method = 'loess' and formula 'y ~ x'
```



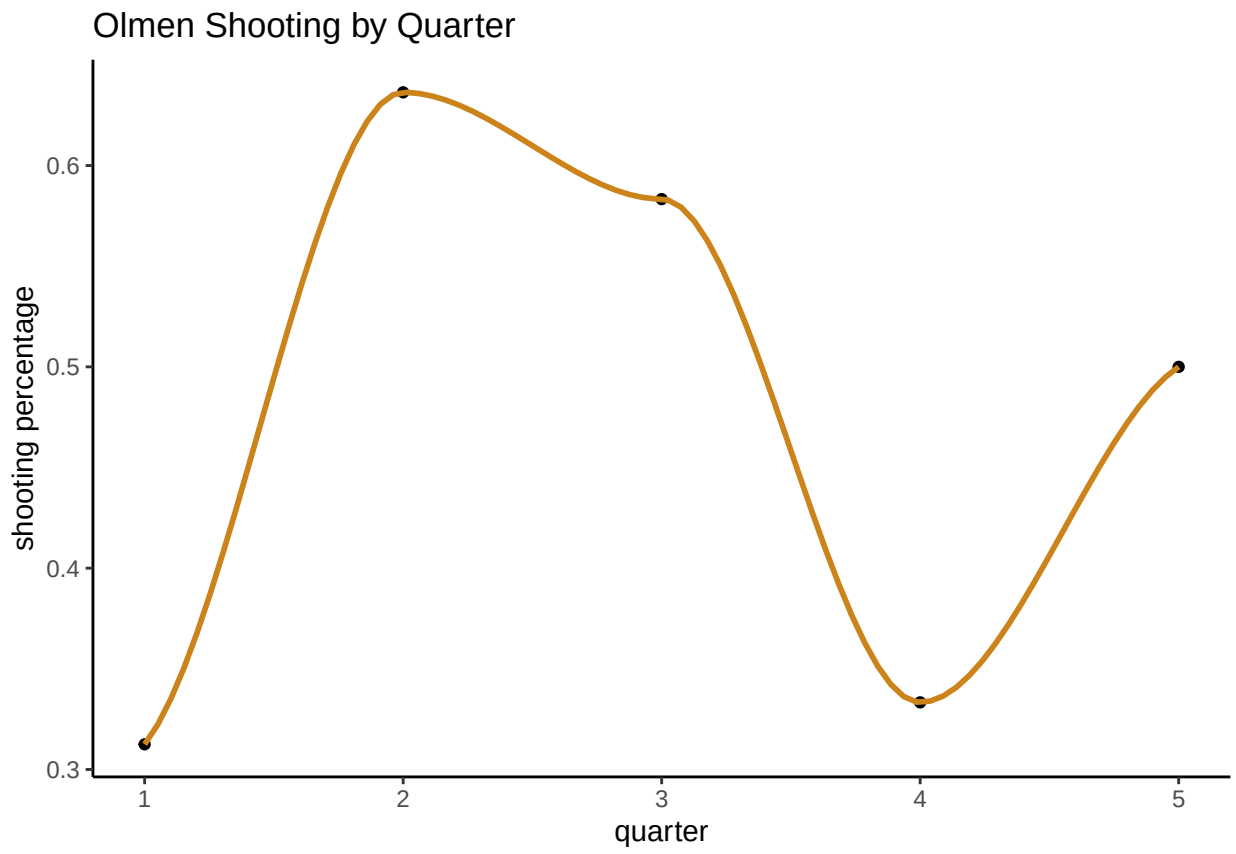

```
quarterly_shooting("kelly")
```

```
## `geom_smooth()` using method = 'loess' and formula 'y ~ x'
```



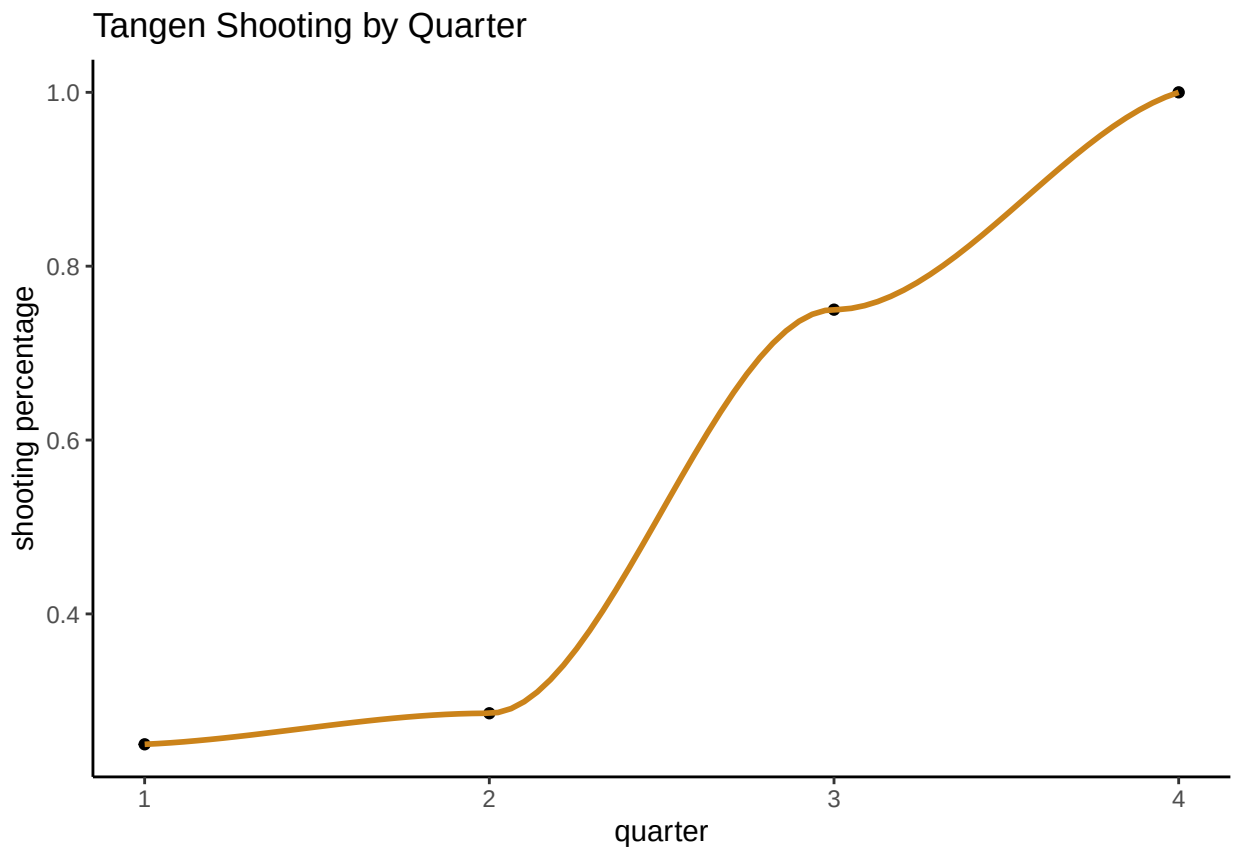

```
quarterly_shooting("olmen")
```

```
## `geom_smooth()` using method = 'loess' and formula 'y ~ x'
```



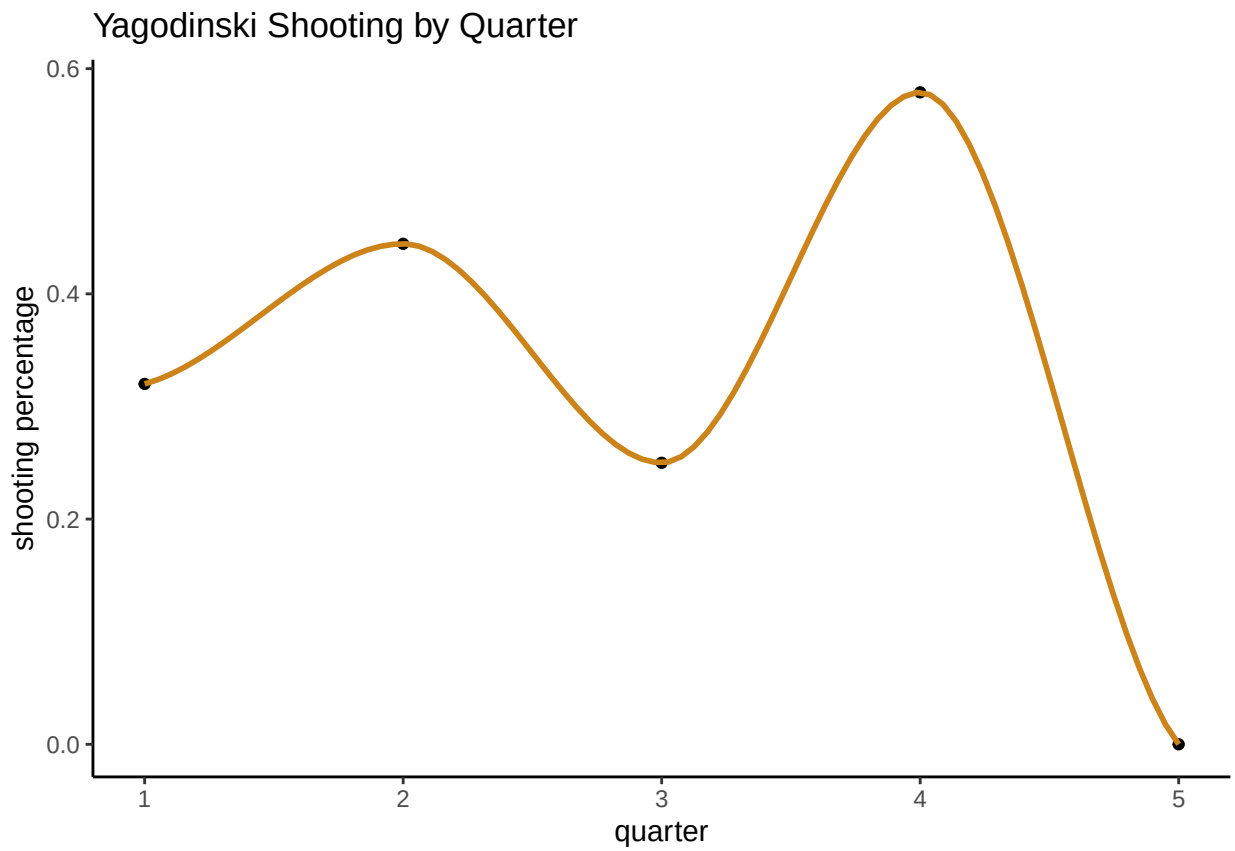

```
quarterly_shooting("tangen")
```

```
## `geom_smooth()` using method = 'loess' and formula 'y ~ x'
```




```
quarterly_shooting("yagodinski")
```

```
## `geom_smooth()` using method = 'loess' and formula 'y ~ x'
```




```
#strong first quarter shooters: hegland, kelly
#strong second quarter shooters: hegland, olmen
#strong third quarter shooters: fix, hegland, kelly, olmen, tangen
#strong fourth quarter shooters: botten, hegland, tangen, yagodinski
```

```
#points per shot (excluding free throws)
pbp %>%
  filter(checkname52 != "TEAM") %>%
  filter(type != "FT") %>%
  group_by(checkname52) %>%
  mutate(points = ifelse(action == "GOOD" & type == "LAYUP", 2, 0),
         points = ifelse(action == "GOOD" & type == "JUMPER", 2, points),
         points = ifelse(action == "GOOD" & type == "3PTR", 3, points),
         points = ifelse(action == "GOOD" & type == "LAYUP", 2, points)) %>%
  summarise(total_points = sum(points),
            shots = sum(action == "GOOD") + sum(action == "MISS"),
            pts_per_shot = total_points/shots) %>%
  arrange(-pts_per_shot)
```

```
## # A tibble: 11 x 4
##    checkname52      total_points shots pts_per_shot
##    <chr>                   <dbl> <int>        <dbl>
##  1 HEGLAND,GRACE              67    55         1.22
##  2 KELLY,RACHEL               86    77         1.12
##  3 OLMEN,SOPHIE               54    50         1.08
```

```
##  4 BOTTEN,CAYDEN              26    25        1.04
##  5 YAGODINSKI,PAIGE           76    76        1
##  6 TANGEN,SARAH               20    23        0.870
##  7 FIX,CASSIE                 33    49        0.673
##  8 HOWDESHELL,SARAH            2     6        0.333
##  9 KORMANN,SOPHIA              2     9        0.222
## 10 ZHEN,ZILING                 2     9        0.222
## 11 JOHNSON,KYLIE               0     0      NaN
```

```
#shot distribution by player
pbp %>%
  filter(checkname52 != "TEAM") %>%
  filter(action == "GOOD" | action == "MISS") %>%
  group_by(checkname52) %>%
  summarise(layups = sum(type == "LAYUP"),
            mid_range = sum(type == "JUMPER"),
            threes = sum (type == "3PTR")
            )
```

```
## # A tibble: 10 x 4
##    checkname52      layups mid_range threes
##    <chr>             <int>     <int>  <int>
##  1 BOTTEN,CAYDEN         8         7     10
##  2 FIX,CASSIE            8        31     10
##  3 HEGLAND,GRACE        35         8     12
##  4 HOWDESHELL,SARAH      2         4      0
##  5 KELLY,RACHEL         46        21     10
##  6 KORMANN,SOPHIA        8         1      0
##  7 OLMEN,SOPHIE          6        22     22
##  8 TANGEN,SARAH          6        10      7
##  9 YAGODINSKI,PAIGE     16        11     49
## 10 ZHEN,ZILING           1         7      1
```

```
pbp %>%
  filter(checkname52 != "TEAM") %>%
  filter(action == "GOOD" | action == "MISS") %>%
  group_by(checkname52) %>%
  summarise(layups = sum(type == "LAYUP"),
            layup_pct = sum(action == "GOOD" & type == "LAYUP")/
              sum(type == "LAYUP")
            ) %>%
  filter(layups > 5) %>%
  arrange(-layup_pct)
```

```
## # A tibble: 8 x 3
##   checkname52      layups layup_pct
##   <chr>             <int>     <dbl>
## 1 YAGODINSKI,PAIGE     16     0.75
## 2 OLMEN,SOPHIE          6     0.667
## 3 KELLY,RACHEL         46     0.630
## 4 FIX,CASSIE            8     0.625
## 5 HEGLAND,GRACE        35     0.6
## 6 BOTTEN,CAYDEN         8     0.5
```

```
## 7 TANGEN,SARAH          6     0.333
## 8 KORMANN,SOPHIA        8     0.125
```

```
pbp %>%
  filter(checkname52 != "TEAM") %>%
  filter(action == "GOOD" | action == "MISS") %>%
  group_by(checkname52) %>%
  summarise(mid_range = sum(type == "JUMPER"),
            mid_pct = sum(action == "GOOD" & type == "JUMPER")/
              sum(type == "JUMPER")
            ) %>%
  filter(mid_range > 5) %>%
  arrange(-mid_pct)
```

```
## # A tibble: 8 x 3
##   checkname52      mid_range mid_pct
##   <chr>                <int>   <dbl>
## 1 HEGLAND,GRACE            8   0.625
## 2 OLMEN,SOPHIE            22   0.5
## 3 TANGEN,SARAH            10   0.5
## 4 BOTTEN,CAYDEN            7   0.429
## 5 KELLY,RACHEL            21   0.381
## 6 FIX,CASSIE              31   0.323
## 7 YAGODINSKI,PAIGE        11   0.182
## 8 ZHEN,ZILING              7   0.143
```

```
pbp %>%
  filter(checkname52 != "TEAM") %>%
  filter(action == "GOOD" | action == "MISS") %>%
  group_by(checkname52) %>%
  summarise(threes = sum (type == "3PTR"),
            three_pct = sum(action == "GOOD" & type == "3PTR")/
              sum(type == "3PTR")
            ) %>%
  filter(threes > 5) %>%
  arrange(-three_pct)
```

```
## # A tibble: 7 x 3
##   checkname52      threes three_pct
##   <chr>             <int>     <dbl>
## 1 HEGLAND,GRACE        12     0.417
## 2 BOTTEN,CAYDEN        10     0.4
## 3 KELLY,RACHEL         10     0.4
## 4 OLMEN,SOPHIE         22     0.364
## 5 YAGODINSKI,PAIGE     49     0.327
## 6 TANGEN,SARAH          7     0.286
## 7 FIX,CASSIE           10     0.1
```

```
pbp %>%
  group_by(checkname52) %>%
  filter(action == "GOOD" | action == "MISS") %>%
  summarise(fts = sum(type == "FT"),
```

```
            ft_pct = sum(action == "GOOD" & type == "FT")/
              sum(type == "FT")
            ) %>%
  filter(fts > 5) %>%
  arrange(-ft_pct)
```

```
## # A tibble: 6 x 3
##   checkname52        fts ft_pct
##   <chr>            <int>  <dbl>
## 1 HEGLAND,GRACE       14  0.714
## 2 OLMEN,SOPHIE        11  0.636
## 3 KELLY,RACHEL        16  0.625
## 4 FIX,CASSIE          20  0.6
## 5 YAGODINSKI,PAIGE    11  0.545
## 6 TANGEN,SARAH         8  0.5
```

```
pbp %>%
  filter(action == "GOOD" | action == "MISS") %>%
  mutate(points = ifelse(action == "GOOD" & type == "LAYUP", 2, 0),
         points = ifelse(action == "GOOD" & type == "JUMPER", 2, points),
         points = ifelse(action == "GOOD" & type == "3PTR", 3, points),
         points = ifelse(action == "GOOD" & type == "LAYUP", 2, points),
         points = ifelse(action == "GOOD" & type == "FT", 1, points))%>%
  group_by(checkname52) %>%
  summarise(`TS%` = 100*sum(points)/
              (2*(sum(type == "LAYUP" | type == "JUMPER" | type == "3PTR") +
                    0.44*sum(type == "FT")
                  )
                                    )
            ) %>%
  arrange(-`TS%`)
```

```
## # A tibble: 10 x 2
##    checkname52      `TS%`
##    <chr>            <dbl>
##  1 HEGLAND,GRACE     62.9
##  2 KELLY,RACHEL      57.1
##  3 OLMEN,SOPHIE      55.6
##  4 BOTTEN,CAYDEN     52
##  5 YAGODINSKI,PAIGE  50.7
##  6 TANGEN,SARAH      45.2
##  7 FIX,CASSIE        38.9
##  8 HOWDESHELL,SARAH  29.1
##  9 ZHEN,ZILING       20.2
## 10 KORMANN,SOPHIA    10.6
```

```
usage <- function(player){
  lineups %>%
    mutate(Lineup = tolower(Lineup)) %>%
    mutate(total_mins = sum(game_time)) %>%
    filter(str_detect(Lineup, {{player}})) %>%
    full_join(pbp) %>%
```

```
    mutate(checkname52 = tolower(checkname52)) %>%
    summarise(usage_rate = sum(100 * (sum(action == "MISS" | action == "GOOD" & type != "FT" & str_dete
                                    ) * (total_mins/5) /
                sum(game_time) * (sum(action == "MISS" | action == "GOOD" & type != "FT") + 0.44 * sum(
              )
    )
}

usage("kelly")
```

```
## Error in mutate(., Lineup = tolower(Lineup)): object 'lineups' not found
```

```
lineups %>%
  filter(str_detect(Lineup, "Botten")) %>%
    summarise(total_mins = sum(game_time))
```

```
## Error in filter(., str_detect(Lineup, "Botten")): object 'lineups' not found
```

```
lineups %>%
    summarise(total_mins = sum(game_time))
```

```
## Error in summarise(., total_mins = sum(game_time)): object 'lineups' not found
```

```
rebounding <- function(player){
  lineups %>%
    mutate(Lineup = tolower(Lineup)) %>%
    mutate(total_mins = sum(game_time)) %>%
    filter(str_detect(Lineup, {{player}})) %>%
    left_join(pbp2) %>%
    mutate(checkname52 = tolower(checkname52)) %>%
    summarise(rebound_rate = 100 * (sum(action == "REBOUND" & str_detect(checkname52, {{player}})) * (to
              /(sum(game_time)*sum(action == "REBOUND"))
              ) %>%
    head(1)
}

rebounding("botten")
```

```
## Error in h(simpleError(msg, call)): error in evaluating the argument 'x' in selecting a method for fu
```

```
rebounding("fix")
```

```
## Error in h(simpleError(msg, call)): error in evaluating the argument 'x' in selecting a method for fu
```

```
rebounding("hegland")
```

```
## Error in h(simpleError(msg, call)): error in evaluating the argument 'x' in selecting a method for fu
```

```
rebounding("kelly")
```

```
## Error in h(simpleError(msg, call)): error in evaluating the argument 'x' in selecting a method for fu
```

```
rebounding("kormann")
```

```
## Error in h(simpleError(msg, call)): error in evaluating the argument 'x' in selecting a method for fu
```

```
rebounding("olmen")
```

```
## Error in h(simpleError(msg, call)): error in evaluating the argument 'x' in selecting a method for fu
```

```
rebounding("yagodinski")
```

```
## Error in h(simpleError(msg, call)): error in evaluating the argument 'x' in selecting a method for fu
```

```
pbp %>%
  filter(action == "STEAL" | action == "BLOCK" | action == "FOUL") %>%
  group_by(checkname52) %>%
  summarise(steals = sum(action == "STEAL"),
            blocks = sum(action == "BLOCK"),
            fouls = sum(action == "FOUL"),
            contests = n(),
            foul_rate = fouls/contests) %>%
  arrange(foul_rate)
```

```
## # A tibble: 10 x 6
##    checkname52      steals blocks fouls contests foul_rate
##    <chr>             <int>  <int> <int>    <int>     <dbl>
##  1 FIX,CASSIE           14      3    15       32     0.469
##  2 HEGLAND,GRACE         9      6    16       31     0.516
##  3 KELLY,RACHEL          6     16    25       47     0.532
##  4 BOTTEN,CAYDEN         2      1     5        8     0.625
##  5 YAGODINSKI,PAIGE      6      2    17       25     0.68
##  6 OLMEN,SOPHIE          1      2    15       18     0.833
##  7 TANGEN,SARAH          0      1     7        8     0.875
##  8 HOWDESHELL,SARAH      0      0     2        2     1
##  9 KORMANN,SOPHIA        0      0     4        4     1
## 10 ZHEN,ZILING           0      0     4        4     1
```

```
#proportions of players rebounds that are offensive rebounds
pbp %>%
  filter(action == "REBOUND") %>%
  filter(checkname52 != "TEAM") %>%
  group_by(checkname52) %>%
  summarise(offensive = sum(type == "OFF"),
            defensive = sum(type == "DEF"),
            total = n(),
            off_reb_rate = offensive/total) %>%
  arrange(-off_reb_rate)
```

```
## # A tibble: 10 x 5
##    checkname52      offensive defensive total off_reb_rate
##    <chr>                <int>     <int> <int>        <dbl>
##  1 KORMANN,SOPHIA           6         5    11        0.545
##  2 HOWDESHELL,SARAH         2         3     5        0.4
##  3 OLMEN,SOPHIE             7        12    19        0.368
##  4 KELLY,RACHEL            17        37    54        0.315
##  5 HEGLAND,GRACE           17        41    58        0.293
##  6 TANGEN,SARAH             4        10    14        0.286
##  7 BOTTEN,CAYDEN            3        11    14        0.214
##  8 YAGODINSKI,PAIGE        11        48    59        0.186
##  9 FIX,CASSIE               5        25    30        0.167
## 10 ZHEN,ZILING              0         3     3        0
```

```
pbp_full %>%
  filter(action == "REBOUND") %>%
  group_by(date) %>%
  summarise(sto_off = sum(team == "STO" & type == "OFF"),
            sto_def = sum(team == "STO" & type == "DEF"),
            opp_off = sum(team != "STO" & type == "OFF"),
            opp_def = sum(team != "STO" & type == "DEF"),
            orb_pct = sto_off/(sto_off + opp_def),
            drb_pct = sto_def/(sto_def + opp_off)) %>%
  add_column(result = c(1,1,1,0,0,0,0))
```

```
## # A tibble: 7 x 8
##   date       sto_off sto_def opp_off opp_def orb_pct drb_pct result
##   <date>       <int>   <int>   <int>   <int>   <dbl>   <dbl>  <dbl>
## 1 2022-11-11      16      32      14      25   0.390   0.696      1
## 2 2022-11-12      10      31      20      17   0.370   0.608      1
## 3 2022-11-16      23      32      10      24   0.489   0.762      1
## 4 2022-11-19      13      35      19      21   0.382   0.648      0
## 5 2022-11-30       8      26      16      23   0.258   0.619      0
## 6 2022-12-03       8      28      13      14   0.364   0.683      0
## 7 2022-12-07       3      29       5      19   0.136   0.853      0
```

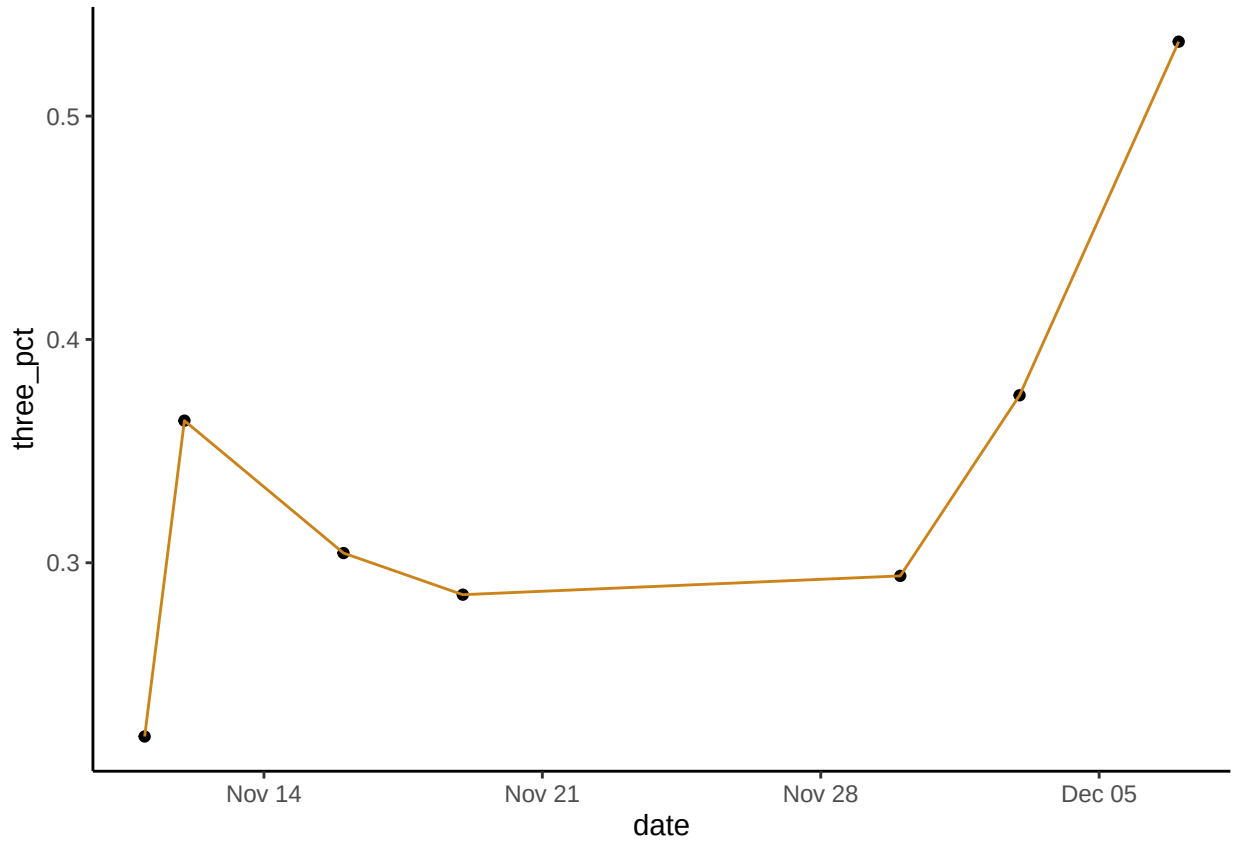
```
#games where rebounding is higher generally corellate strongly with wins
```

```
game_shooting <- pbp %>%
  filter(checkname52 != "TEAM") %>%
  filter(action == "GOOD" | action == "MISS") %>%
  group_by(date) %>%
  summarise(layups = sum(type == "LAYUP"),
            mid_range = sum(type == "JUMPER"),
            threes = sum (type == "3PTR"),
            layup_pct = sum(action == "GOOD" & type == "LAYUP") / layups,
            mid_pct = sum(action == "GOOD" & type == "JUMPER") / mid_range,
            three_pct = sum(action == "GOOD" & type == "3PTR") / threes
            )

game_shooting
```

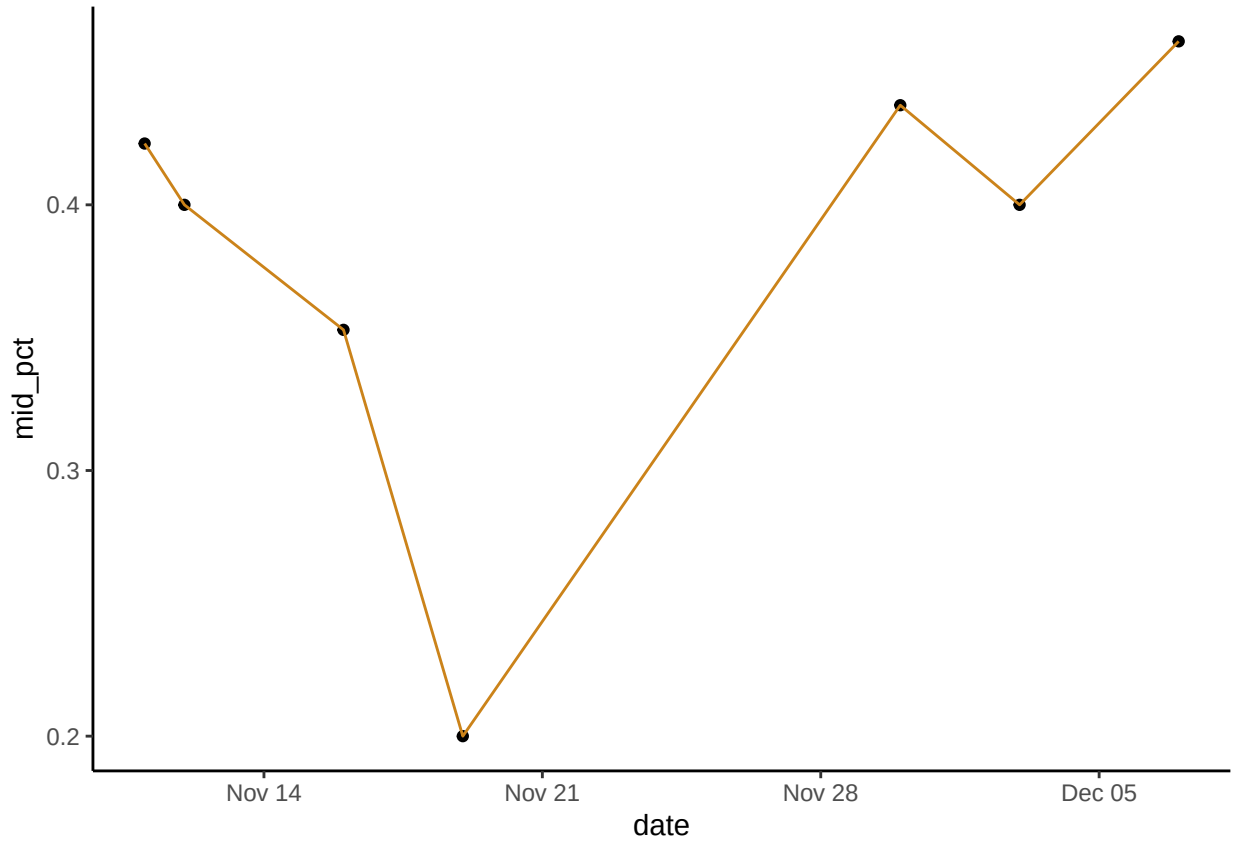
```
## # A tibble: 7 x 7
```

```
##   date       layups mid_range threes layup_pct mid_pct three_pct
##   <date>      <int>     <int>  <int>     <dbl>   <dbl>     <dbl>
## 1 2022-11-11     22        26     18     0.682   0.423     0.222
## 2 2022-11-12     17        15     11     0.706   0.4       0.364
## 3 2022-11-16     29        17     23     0.379   0.353     0.304
## 4 2022-11-19     18        20     21     0.722   0.2       0.286
## 5 2022-11-30     22        16     17     0.591   0.438     0.294
## 6 2022-12-03     13        15     16     0.462   0.4       0.375
## 7 2022-12-07     15        13     15     0.533   0.462     0.533
```

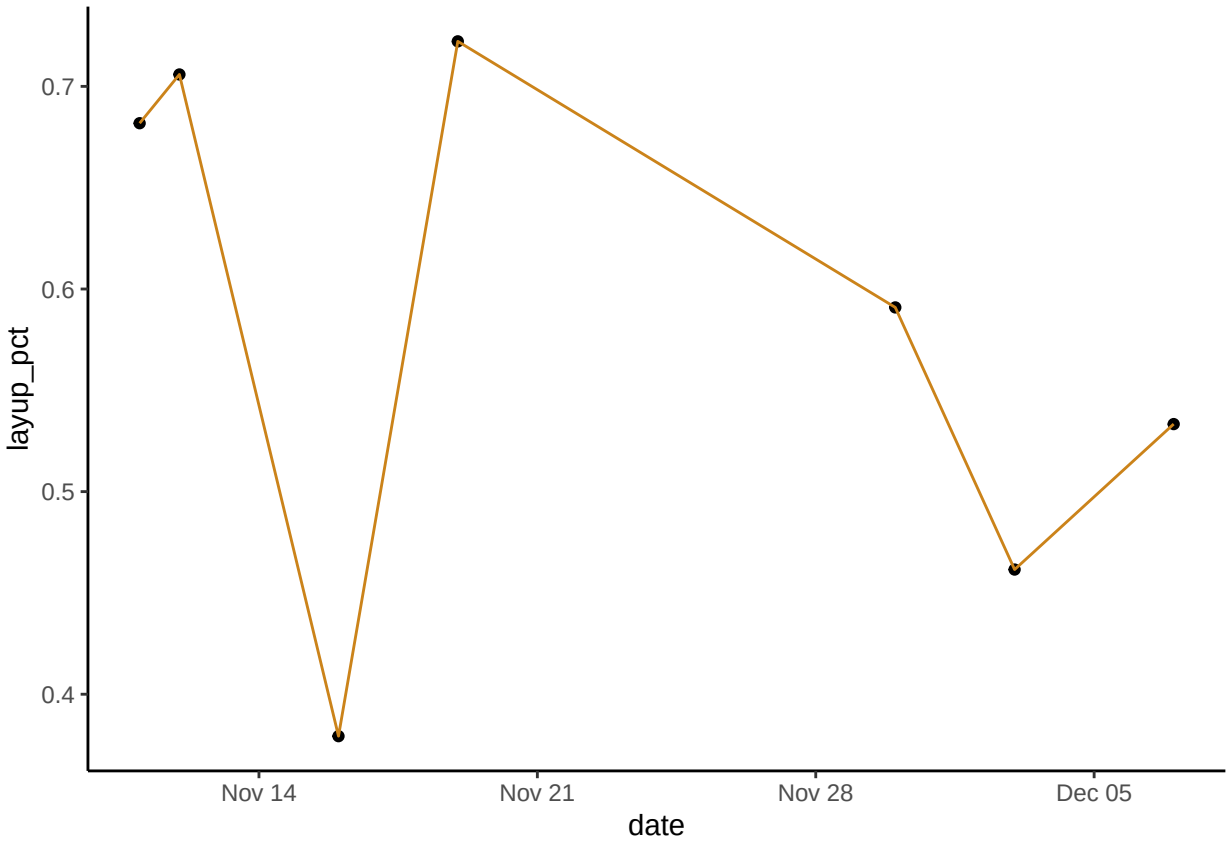
```
game_shooting %>%
  ggplot(aes(x = date, y = three_pct)) +
  geom_point() +
  geom_line(color = "#CB831A") +
  theme_classic()
```




```
#three pointers have recently gotten significantly better

game_shooting %>%
  ggplot(aes(x = date, y = mid_pct)) +
  geom_point() +
  geom_line(color = "#CB831A") +
  theme_classic()
```




```
#mid range shots have been relatively consistent outside of the 11/19 game

game_shooting %>%
  ggplot(aes(x = date, y = layup_pct)) +
  geom_point() +
  geom_line(color = "#CB831A") +
  theme_classic()
```


0.7
0.6
0.5
0.4
layup_pct
Nov 14
Nov 21
Nov 28
Dec 05
date