Event Data

Luke Julian

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Intorduction

Data courtesy of *StatsBomb*. Data used for this document is from the 2018 and 2022 Men's World Cups, the 2019 Women's world Cup, and the 2022 Women's Euros.

Try to run only once:

All player stats should be normalized to per 90 minute. Players that have played less than 180 total minutes in the World Cup are excluded from rate statistics.

Progressive Play

A progressive action is one that advances the ball 10 yards closer to goal than than to furthest it has been in the last 6 relevant events in the sequence of play, or when the ball in entered into the 18 yard box. The the common actions that can be considered progressive are passes (pP) and carries (pC).
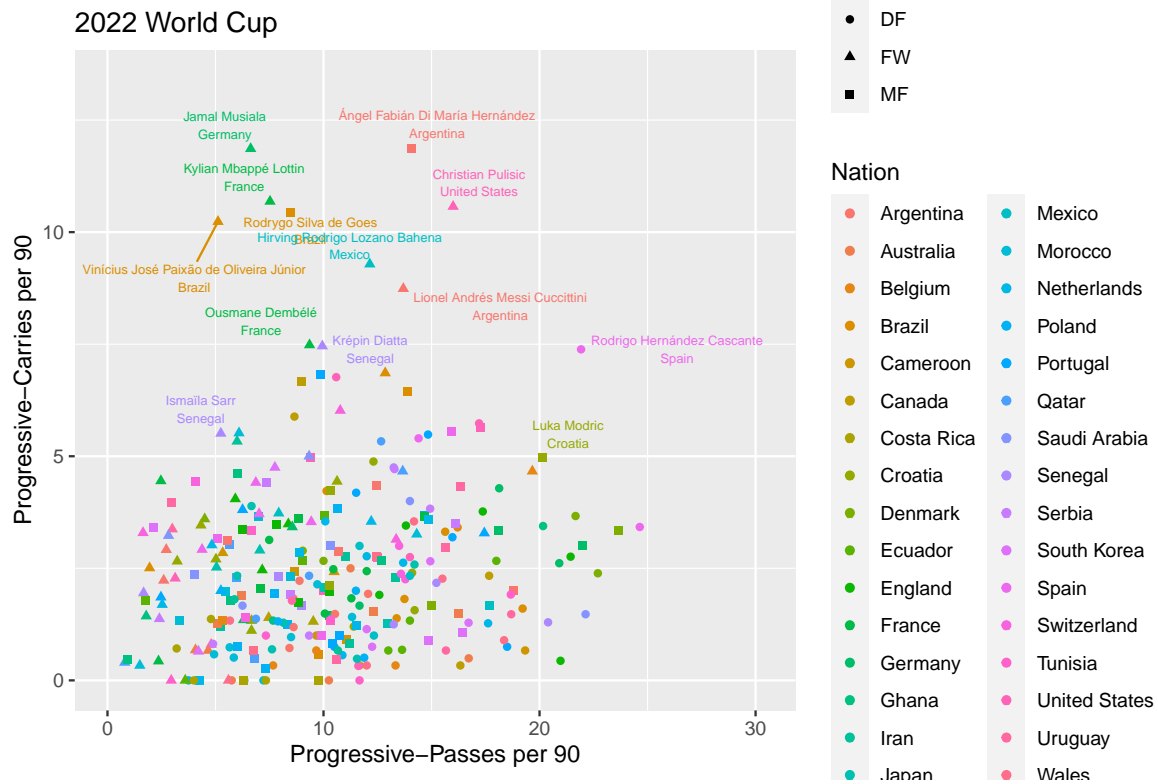
Progressive summary of players at the 2022 World Cup

```
##    team.name             pC              pP             X90s
##  Length:294        Min.   : 0.000   Min.   : 0.800   Min.   :2.011
##  Class :character  1st Qu.: 1.237   1st Qu.: 6.308   1st Qu.:2.681
##  Mode  :character  Median : 2.263   Median :10.050   Median :3.000
##                    Mean   : 2.590   Mean   :10.276   Mean   :3.469
##                    3rd Qu.: 3.460   3rd Qu.:13.659   3rd Qu.:4.000
##                    Max.   :11.875   Max.   :24.639   Max.   :7.667
```
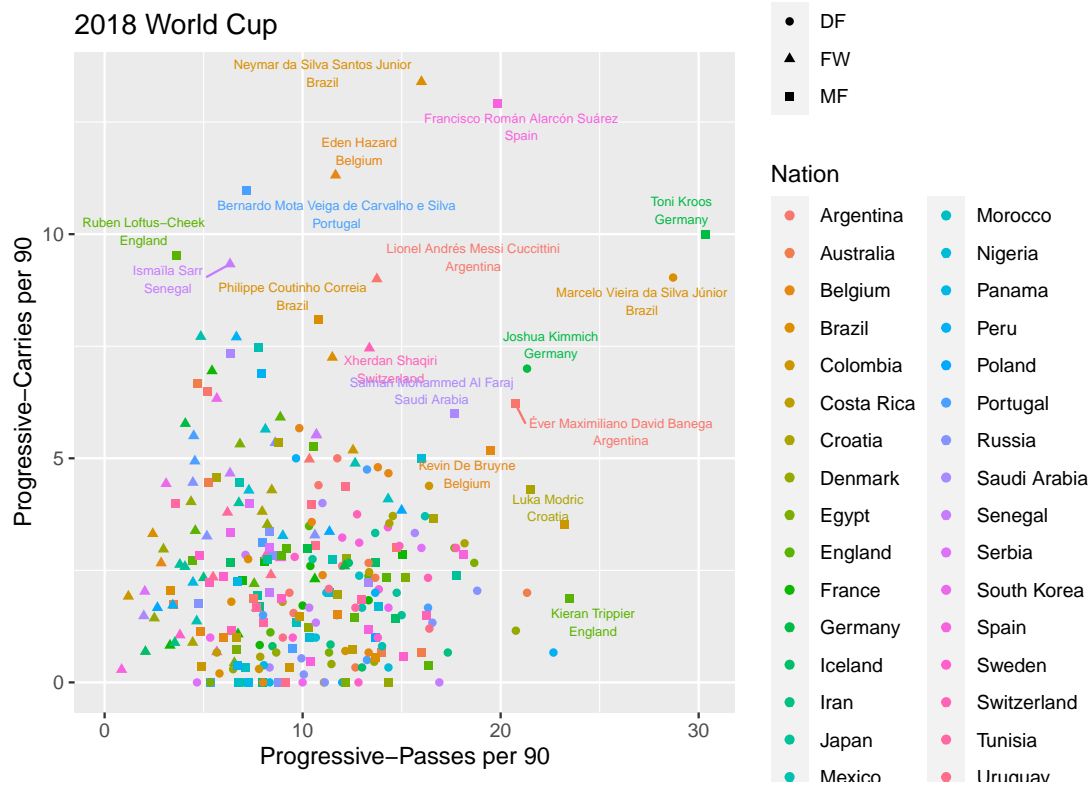
Progressive summary of players at the 2018 World Cup

```
##        pC              pP              X90s
##  Min.   : 0.000   Min.   : 0.8571   Min.   :2.022
##  1st Qu.: 1.000   1st Qu.: 6.7256   1st Qu.:2.883
##  Median : 2.290   Median : 9.8882   Median :3.000
##  Mean   : 2.717   Mean   :10.2675   Mean   :3.619
##  3rd Qu.: 3.637   3rd Qu.:13.3333   3rd Qu.:4.017
##  Max.   :13.400   Max.   :30.3333   Max.   :7.678
```
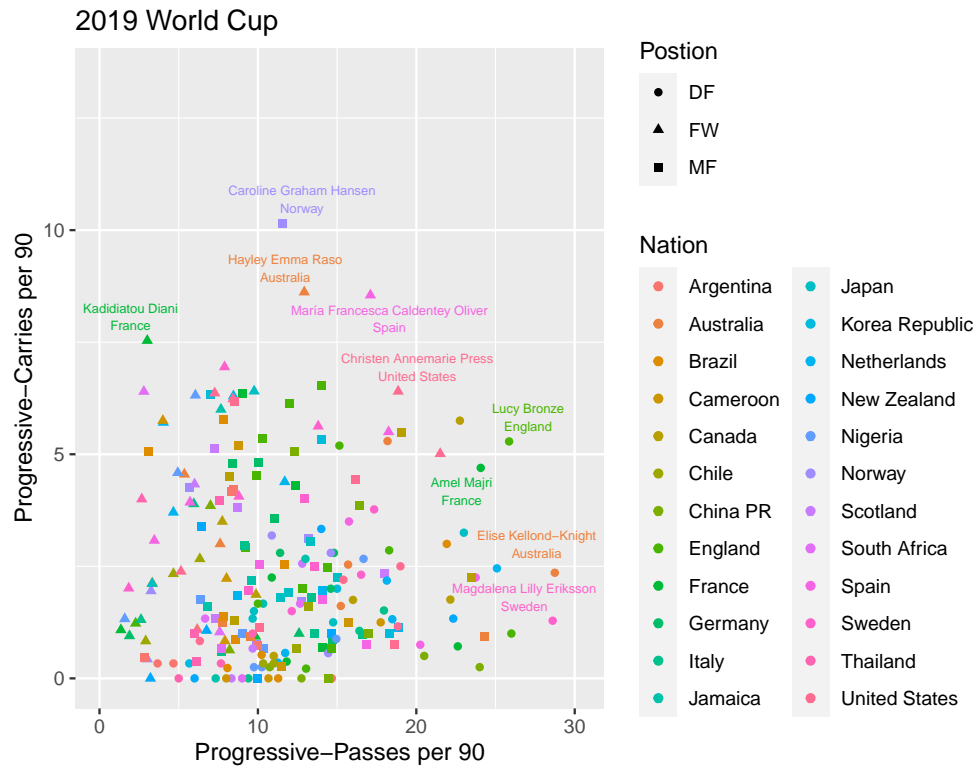
Progression at the 2022 World Cup

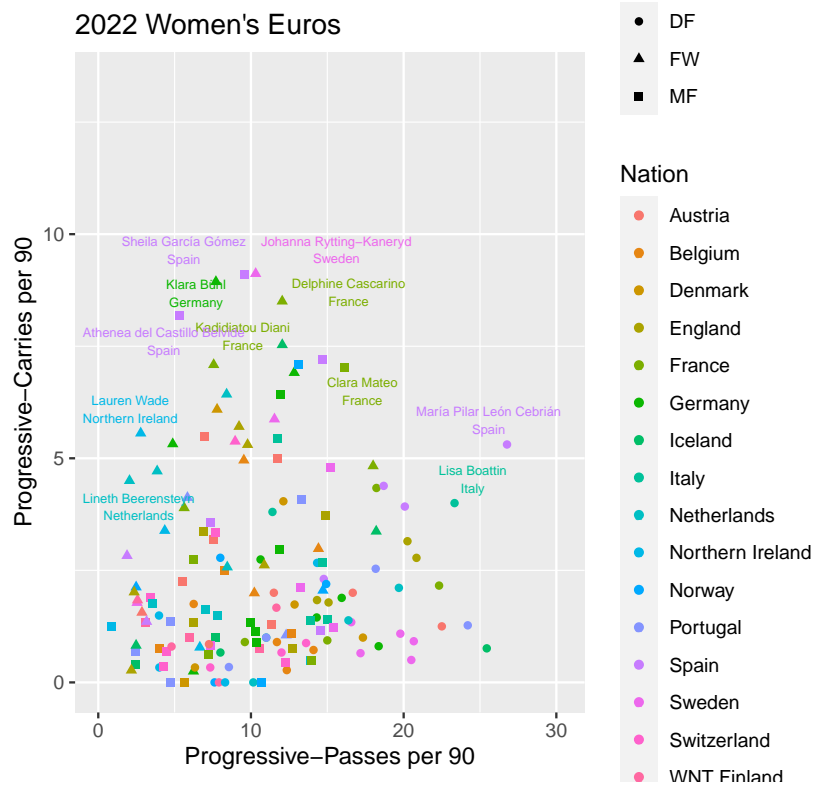

2022 World Cup

Legend:
- ● DF
- ▲ FW
- ■ MF

Nation

Argentina	Mexico
Australia	Morocco
Belgium	Netherlands
Brazil	Poland
Cameroon	Portugal
Canada	Qatar
Costa Rica	Saudi Arabia
Croatia	Senegal
Denmark	Serbia
Ecuador	South Korea
England	Spain
France	Switzerland
Germany	Tunisia
Ghana	United States
Iran	Uruguay
Japan	Wales

Labeled points: Jamal Musiala (Germany), Ángel Fabián Di María Hernández (Argentina), Kylian Mbappé Lottin (France), Christian Pulisic (United States), Rodrygo Silva de Goes, Hirving Rodrigo Lozano Bahena (Mexico), Vinícius José Paixão de Oliveira Júnior (Brazil), Lionel Andrés Messi Cuccittini (Argentina), Ousmane Dembélé (France), Krépin Diatta (Senegal), Rodrigo Hernández Cascante (Spain), Ismaïla Sarr (Senegal), Luka Modric (Croatia)

Progression at the 2018 World Cup

2018 World Cup

Legend:
- ● DF
- ▲ FW
- ■ MF

Nation

Argentina	Morocco
Australia	Nigeria
Belgium	Panama
Brazil	Peru
Colombia	Poland
Costa Rica	Portugal
Croatia	Russia
Denmark	Saudi Arabia
Egypt	Senegal
England	Serbia
France	South Korea
Germany	Spain
Iceland	Sweden
Iran	Switzerland
Japan	Tunisia
Mexico	Uruguay

Labeled points: Neymar da Silva Santos Junior (Brazil), Francisco Román Alarcón Suárez (Spain), Eden Hazard (Belgium), Bernardo Mota Veiga de Carvalho e Silva (Portugal), Toni Kroos (Germany), Ruben Loftus-Cheek (England), Lionel Andrés Messi Cuccittini (Argentina), Ismaïla Sarr (Senegal), Philippe Coutinho Correia (Brazil), Marcelo Vieira da Silva Júnior (Brazil), Xherdan Shaqiri (Switzerland), Joshua Kimmich (Germany), Salman Mohammed Al Faraj (Saudi Arabia), Éver Maximiliano David Banega (Argentina), Kevin De Bruyne (Belgium), Luka Modric (Croatia), Kieran Trippier (England)

2

Progression at the 2019 World Cup

2019 World Cup

Postion
- ● DF
- ▲ FW
- ■ MF

Nation
- ● Argentina
- ● Australia
- ● Brazil
- ● Cameroon
- ● Canada
- ● Chile
- ● China PR
- ● England
- ● France
- ● Germany
- ● Italy
- ● Jamaica
- ● Japan
- ● Korea Republic
- ● Netherlands
- ● New Zealand
- ● Nigeria
- ● Norway
- ● Scotland
- ● South Africa
- ● Spain
- ● Sweden
- ● Thailand
- ● United States

Progression at the 2022 Women's Euros

2022 Women's Euros

- ● DF
- ▲ FW
- ■ MF

Nation
- ● Austria
- ● Belgium
- ● Denmark
- ● England
- ● France
- ● Germany
- ● Iceland
- ● Italy
- ● Netherlands
- ● Northern Ireland
- ● Norway
- ● Portugal
- ● Spain
- ● Sweden
- ● Switzerland
- ● WNT Finland

Fun little observation: Mapi Leon, the Spanish defender responsible for the most progressive passes and over 5 progressive carries per 90 at Euro22, is one of the exiled players from Jorge Vilda's World Cup squad. While the group of players has dwindled, she is one of the group refusing to play for the national team while Vilda remains its manager.

Directness

Team Play

Directness of play can be measured by the speed at which a team progresses the ball. The directness of a sequence play (a sequence being connsecutive attacking actions, such as passes, carries, dribbles, shots) is the progressed distance from the first event in the sequence to the last per second (so divided by the duration of the sequence). The intricacy of team also relates to how direct they play, which is simply the number of passes per sequence. Generally less direct teams pass more, opting from to patiently move the ball backwards and side to side.

Directness of Teams at the 2018 World Cup

Directness of Teams at the 2019 World Cup

Directness of Teams at the 2022 Women's Euros
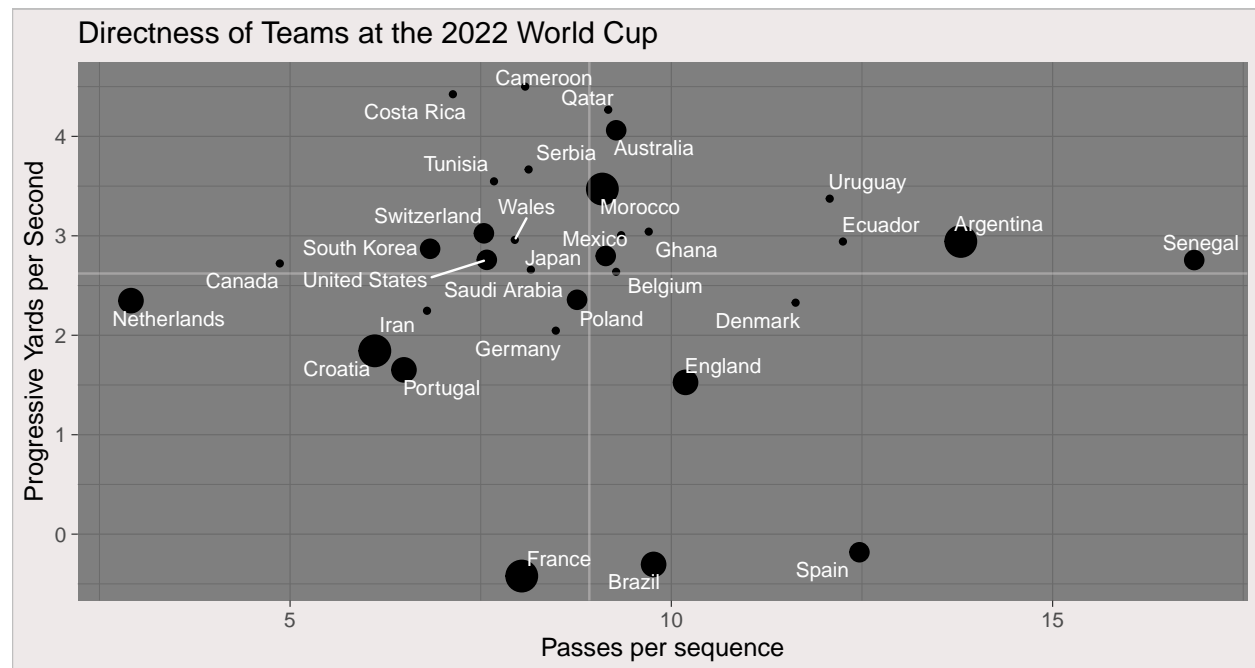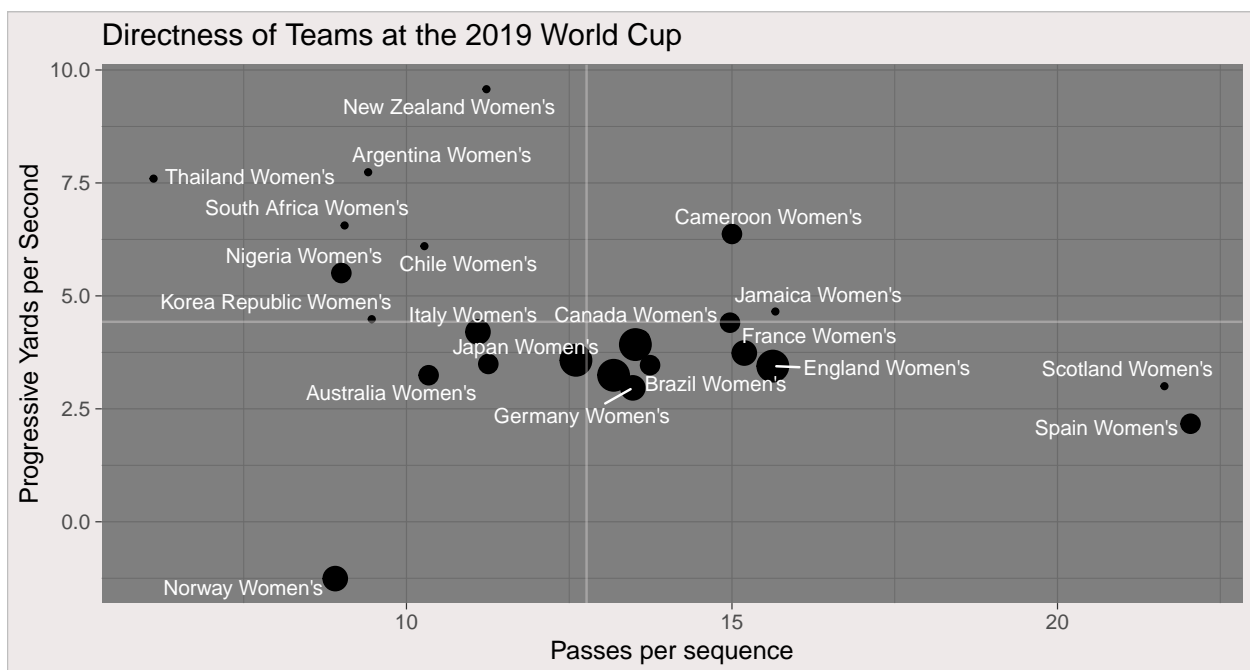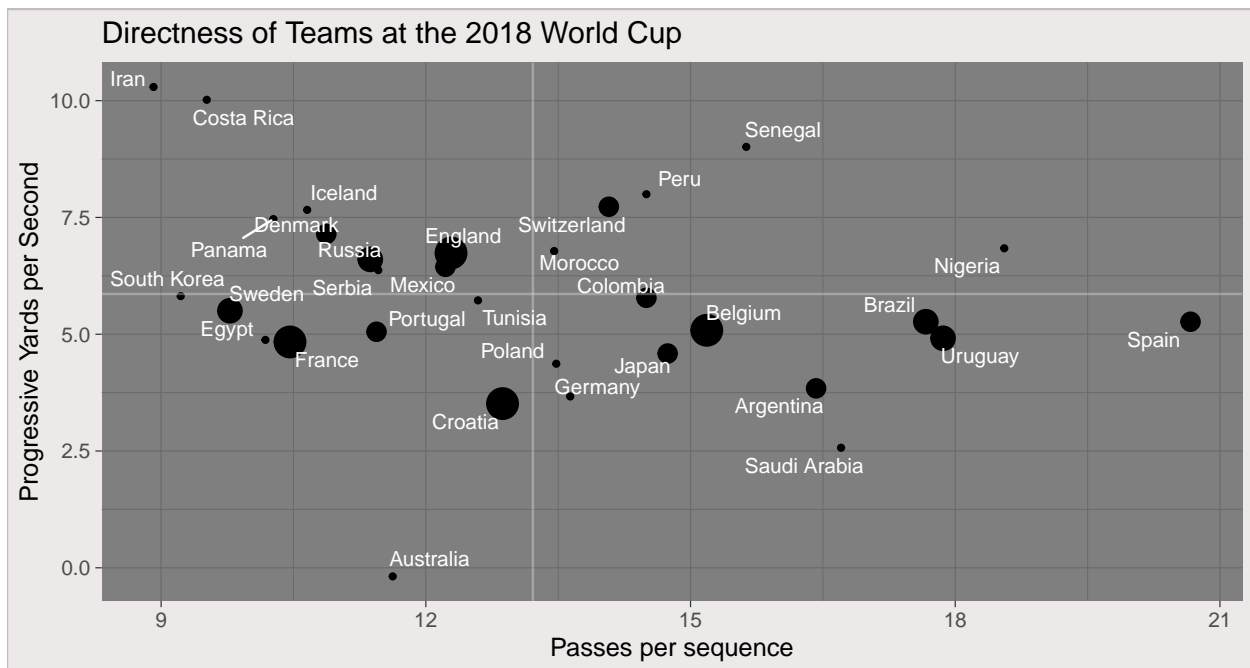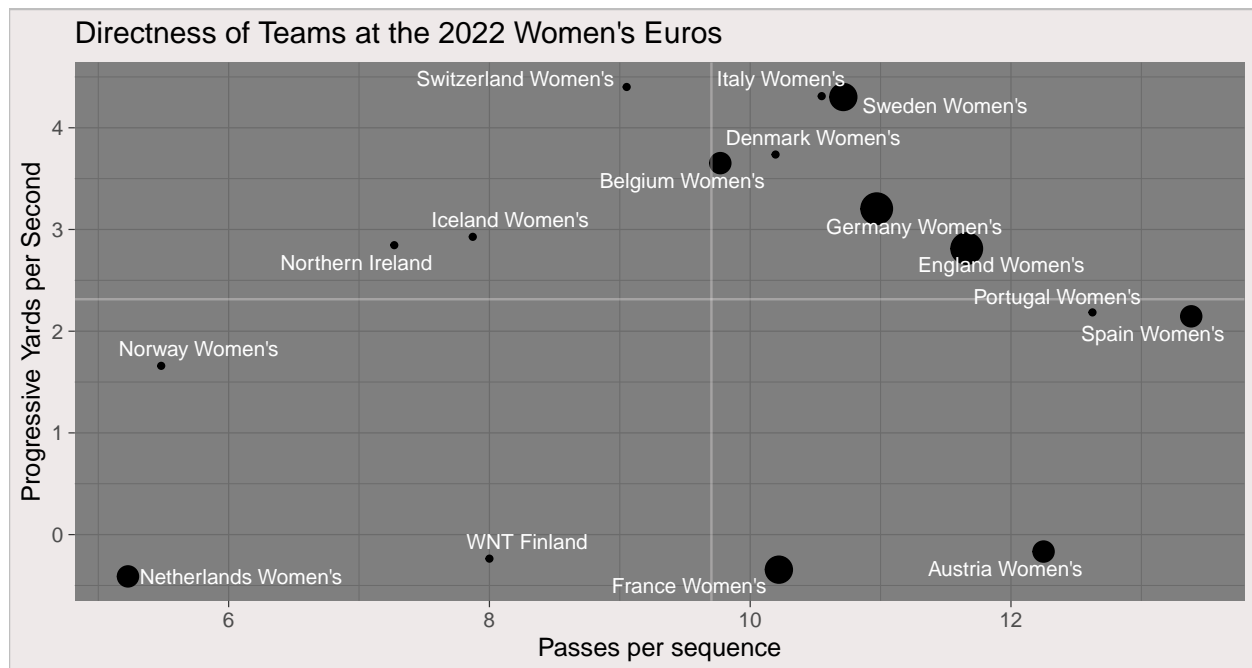
Attacks

A direct attack is a possession starting in the defensive half in which over half the offensive actions move the ball closer to the goal.
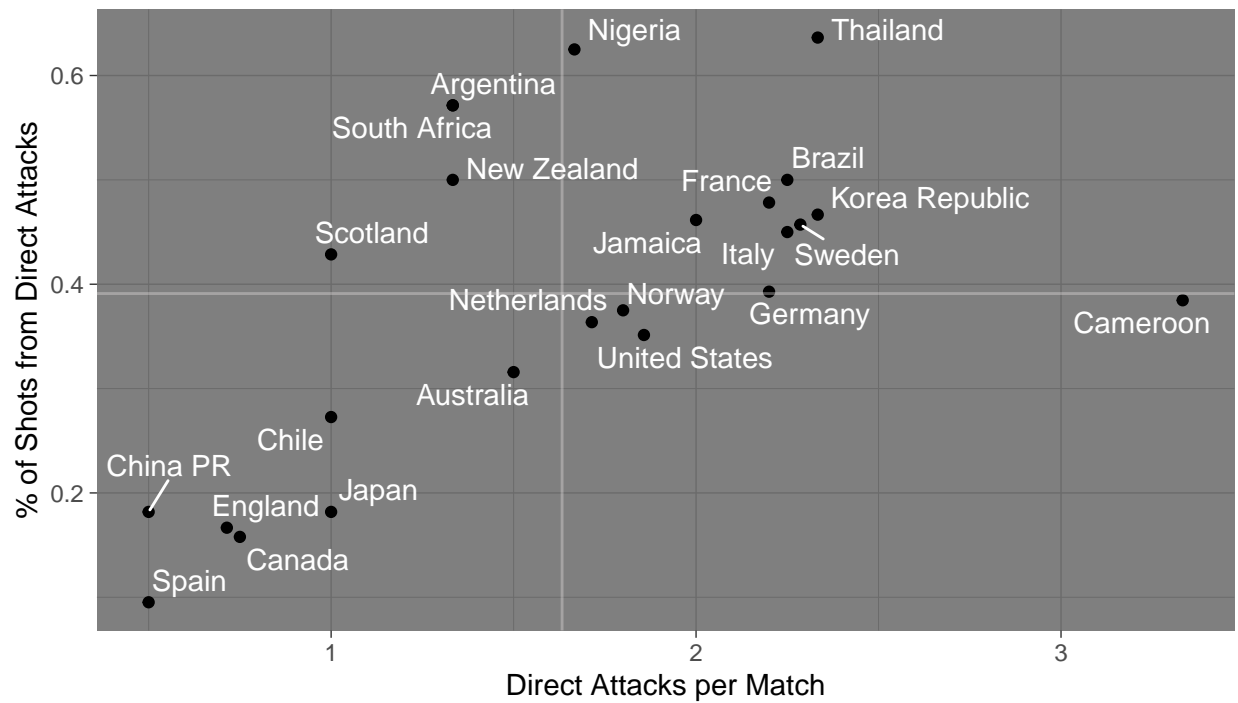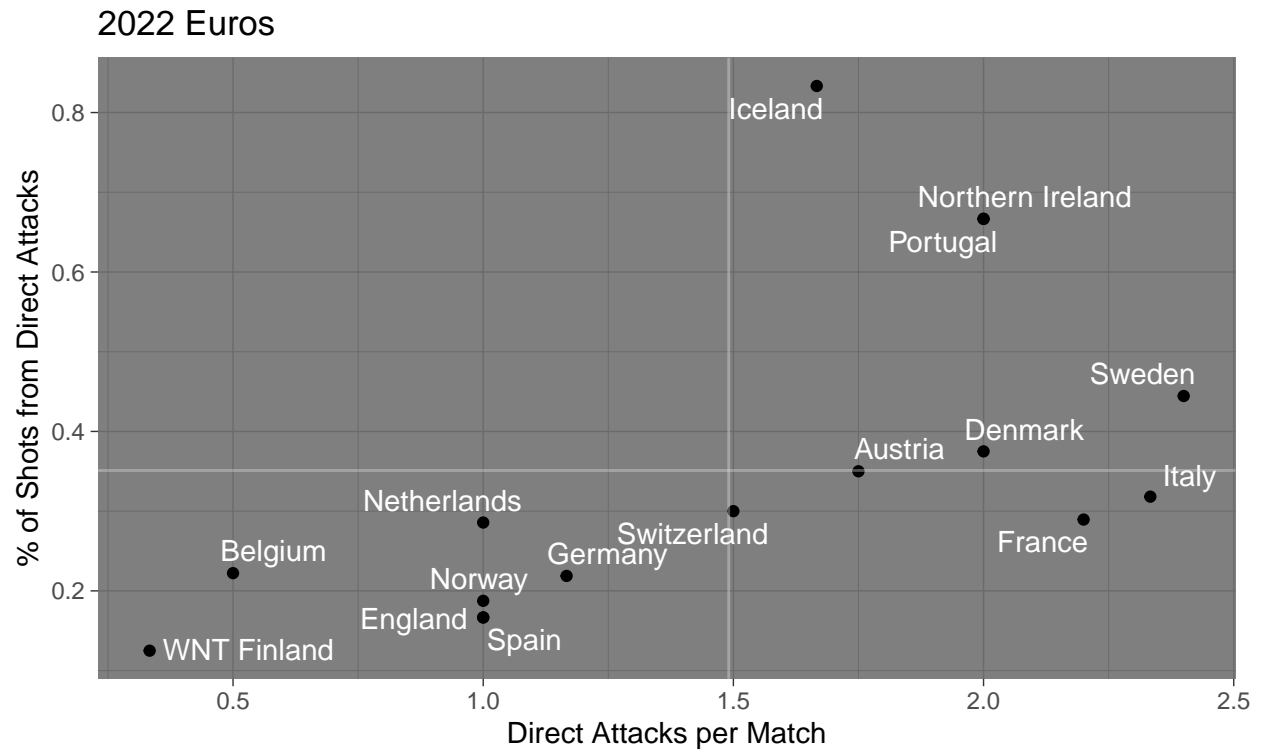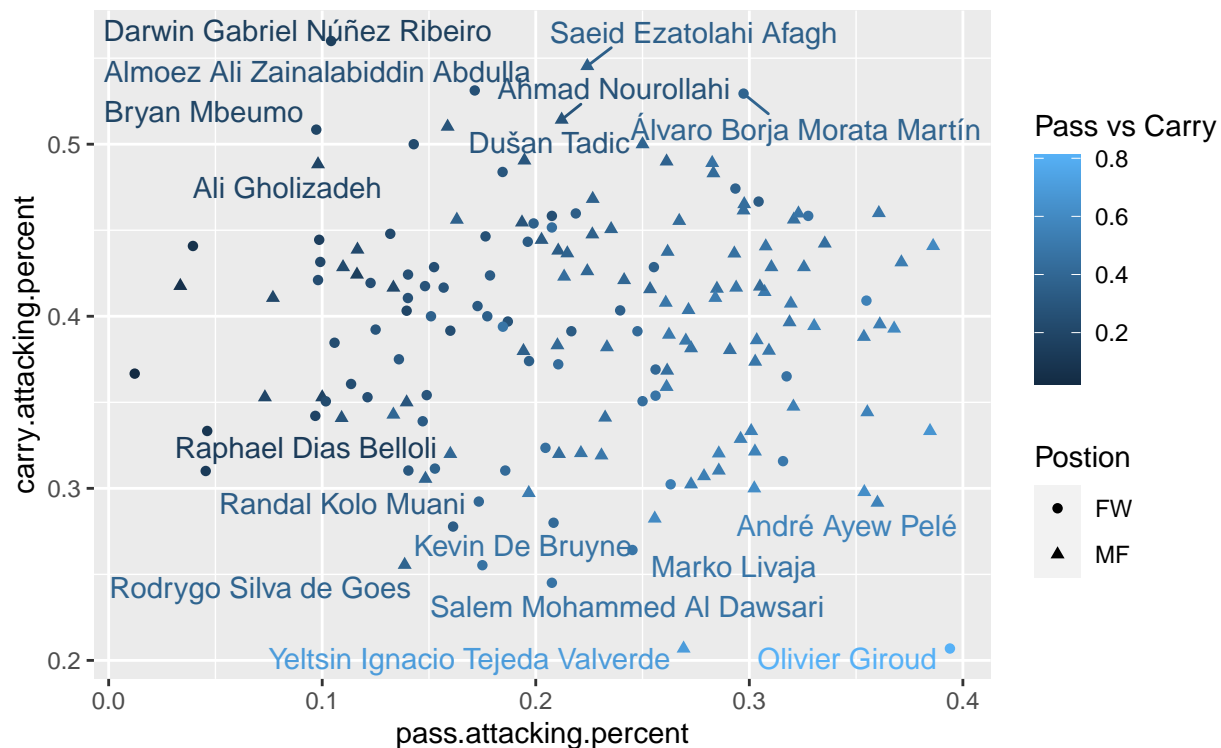
2022 World Cup

2018 World Cup

2019 World Cup

2022 Euros

A scatter plot titled "2022 Euros" with x-axis "Direct Attacks per Match" (ranging 0.5 to 2.5) and y-axis "% of Shots from Direct Attacks" (ranging ~0.2 to 0.8). Labeled data points: Iceland, Northern Ireland, Portugal, Sweden, Denmark, Austria, Italy, Netherlands, Switzerland, Germany, France, Belgium, Norway, England, Spain, WNT Finland.
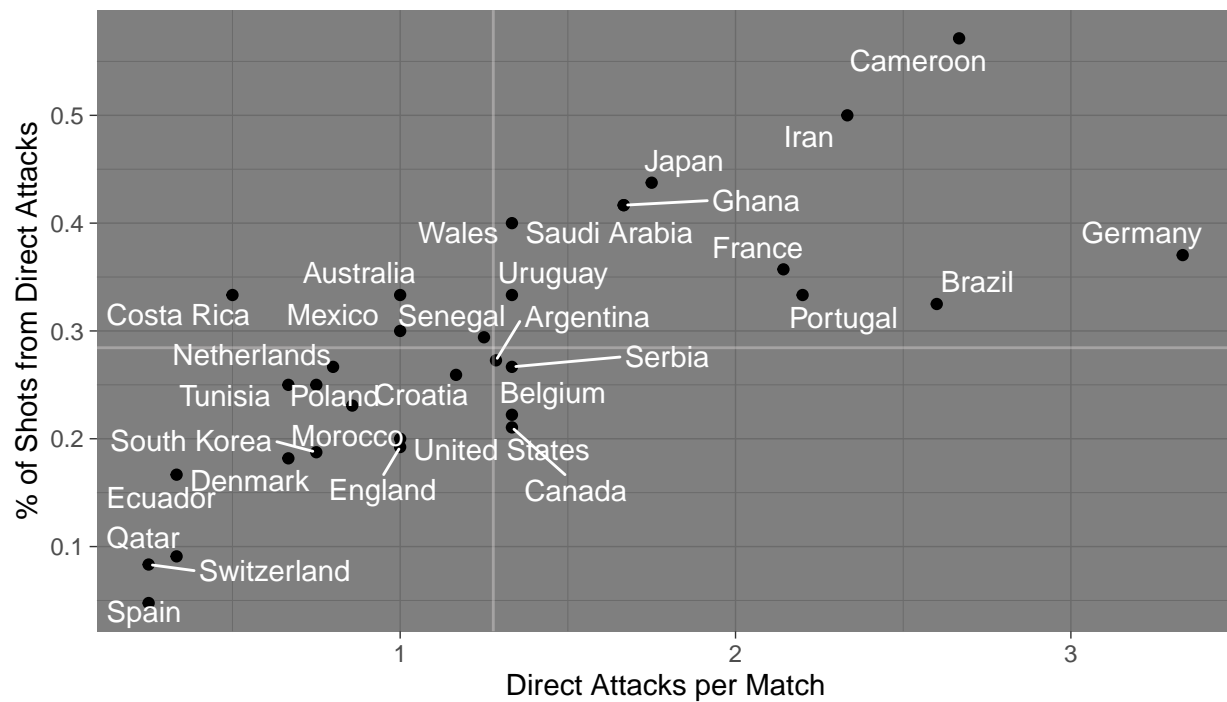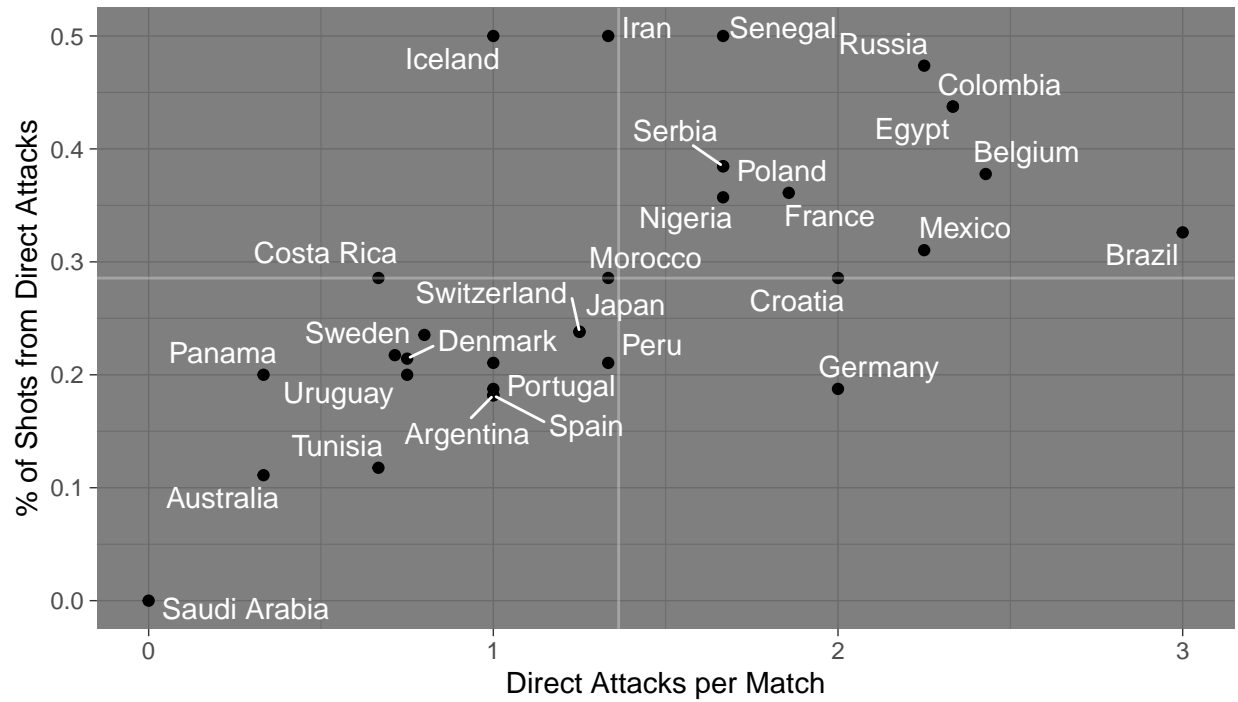
Forward Movement

2022 World Cup

```
## Warning: ggrepel: 147 unlabeled data points (too many overlaps). Consider
## increasing max.overlaps
```

2018 World Cup

```
## Warning: ggrepel: 157 unlabeled data points (too many overlaps). Consider
## increasing max.overlaps
```
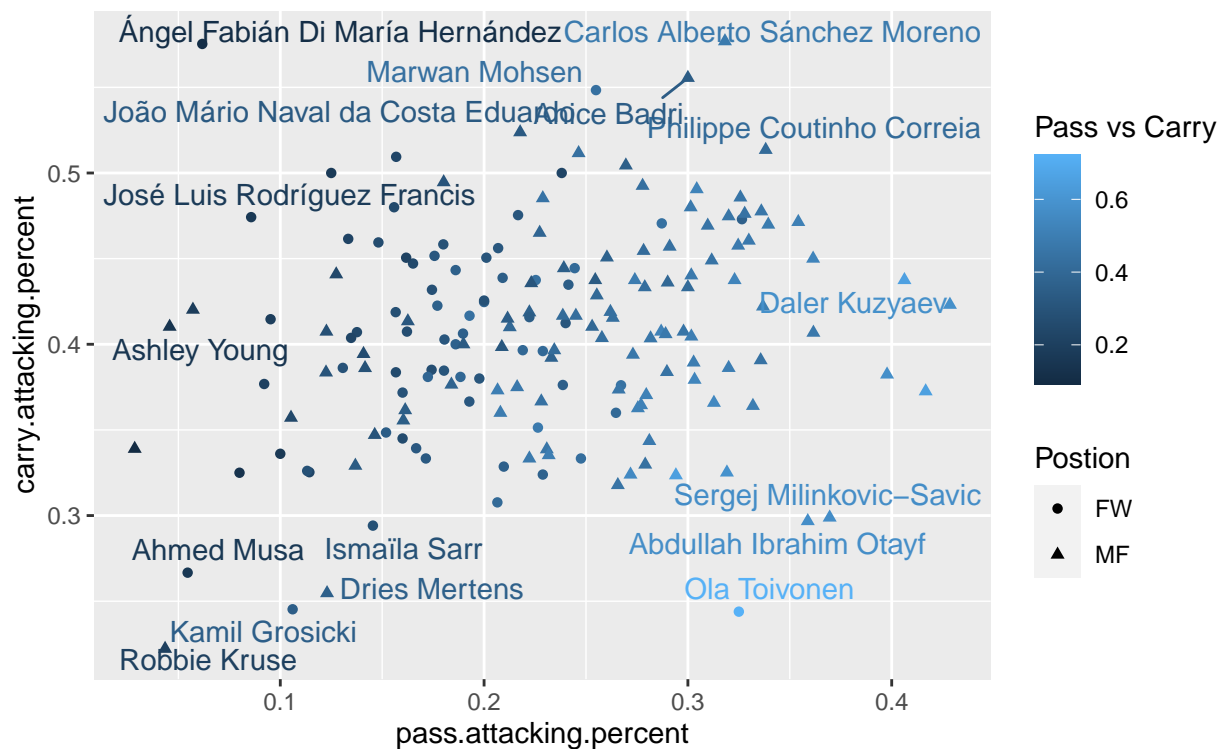
2019 World Cup

```
## Warning: ggrepel: 118 unlabeled data points (too many overlaps). Consider
## increasing max.overlaps
```
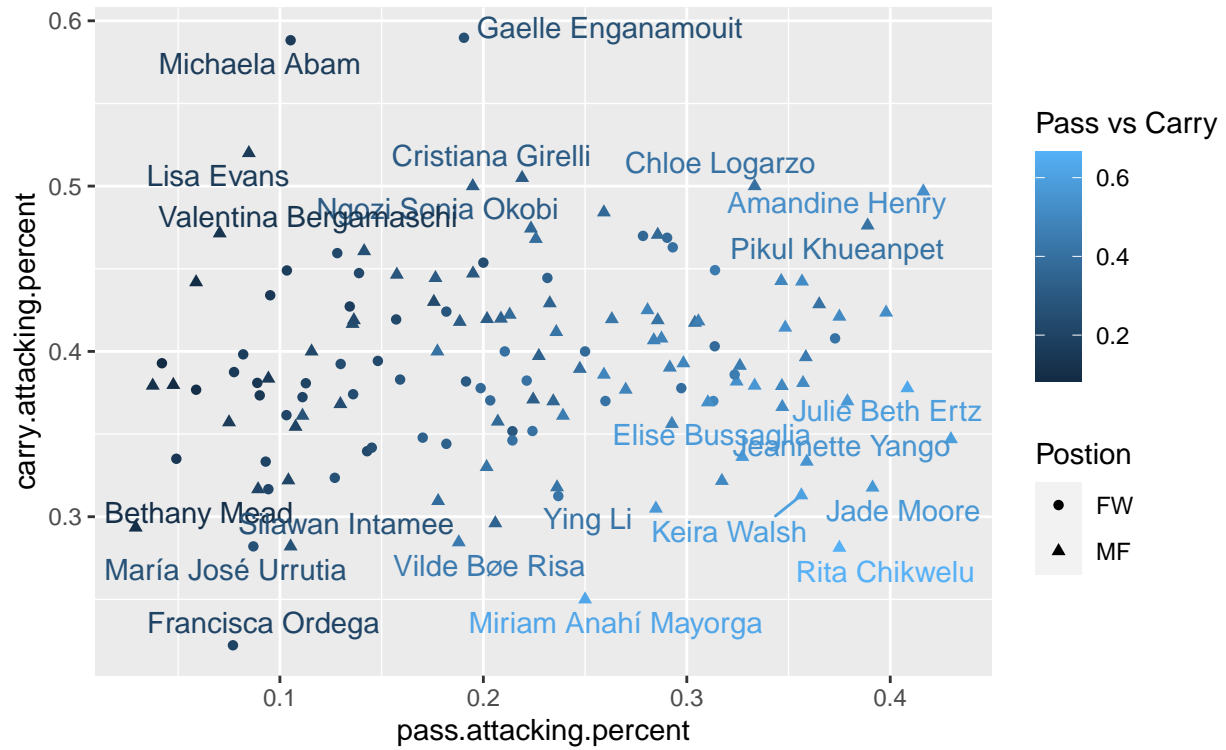

2022 Euros

```
## Warning: ggrepel: 72 unlabeled data points (too many overlaps). Consider
## increasing max.overlaps
```
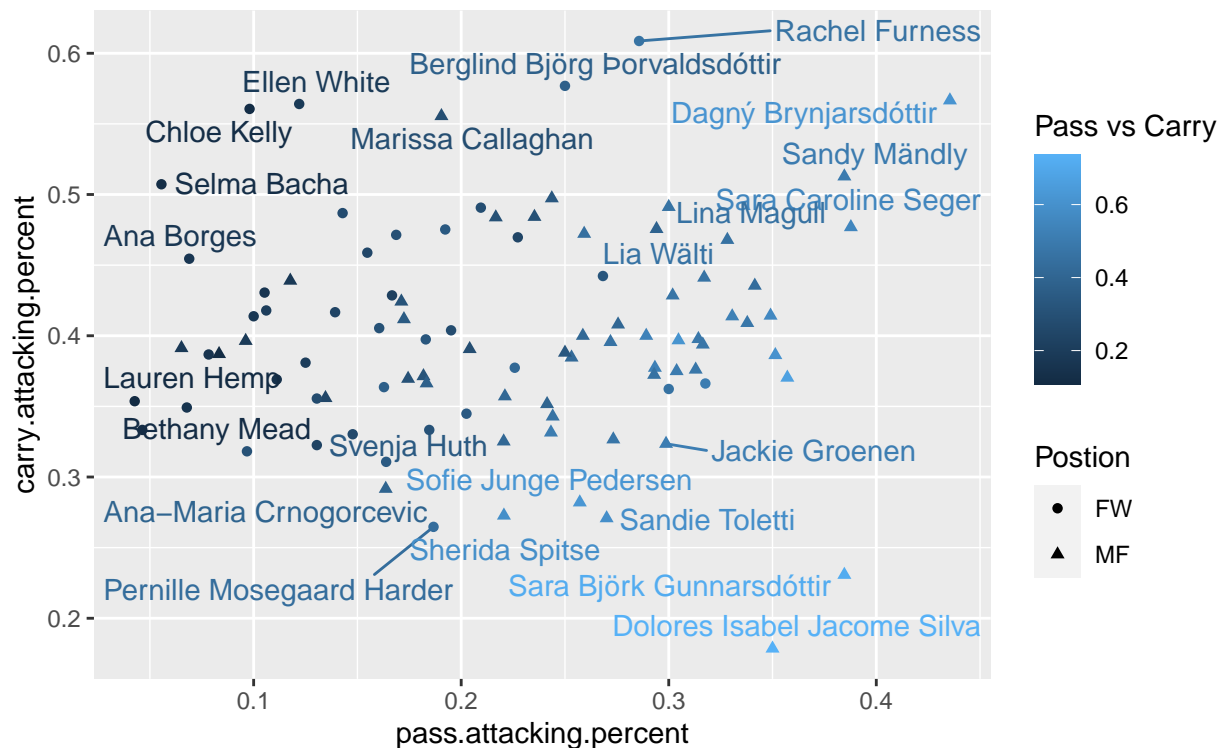
Passing Networks

Passing networks a fairly intuitive football-data visualization. The points/nodes represent each player on a given team, and the line/path connections between represent passes between two players. Nodes are placed at the average location that a given player passes the ball. Passes are normalized to per 90 minute rate. Connections are made when the first player passes to the second at least five times per 90. The number of passes per 90 scales the sizes of the nodes and lines. The network only represents the passes made by the first eleven, and it stops when the first sub is made for the team.

Argentina vs. France
First sub in minute 63

3869685

The passing networks above can tell the story of a match (at least part of it) and the roles of certain players. First looking at Argentina's network, nearly every players has at least three line connected to them; this shows that the team was strongly connected by passing and passing well. Additionally we can see that on a simple level, Argentina setup in a 4-3-3 with the fullbacks pushing up slightly further and Mac Allister playing more advanced than his midfield partners. More interestingly, there is an obvious difference in how their outside forwards play. Di Maria on the left is pushed high and wide, reflecting how his play focused around taking on defenders in wide-attacking areas to create chances, such as winning a penalty for the first goal. On the right is Messi. Throughout Messi's entire career, his positioning has been basically the same with some variations on it: He plays toward the right, and comes more centrally and deeper to get the ball. His positioning for Argentina follows this rule, with his average passing position being nearly as deep as the highest midfielder, and his width being on the border of the central area and right half-space.

France vs. Argentina
First sub in minute 40

3869685

France's passing network tells a completely different story. As aside from the defense and the outside-backs to the wingers, there is very little connecting. Perhaps most concerningly, the midfield has almost no connections at all. Tchouameni has no connections with his defense, showing him completely unable to connect the defense and attack. Meanwhile, Greizman is on island high up the pitch. The network also shows only one link to the team's centerforward (Giroud), which is a faint link from his goalkeeper. If the lack of passing and connectedness doesn't show that France struggled to generate attacks, the fact that their striker couldn't get the ball should.

Watching the match backs up these conclusions, with France looking so lost that they made substitutions before halftime, and Argentina completely controlling the game until Di Maria's departure in the 62 minute. What happened after that was a different story, but each network cut off before the game flipped.

France vs. Croatia

First sub in minute 54

Croatia vs. France
First sub in minute 70

8658

Defense

Ball Recoveries

World Cup 2018

Here are some ball recovery maps from the 2018 world cup. These are 4 of the top 5 outfield players in totals in that category. Which is a great excuse to behold the beauty of an N'Golo Kante Ball Recovery Map.

```
## # A tibble: 560 x 4
##    player.id player.name      team.name total_br
##        <int> <chr>            <chr>        <dbl>
## 1      3509 Thibaut Courtois  Belgium         44
## 2      5463 Luka Modrić       Croatia         44
## 3      3468 Jordan Pickford   England         39
## 4      3444 Danijel Subašić   Croatia         38
## 5      5171 Roman Zobnin      Russia          35
```
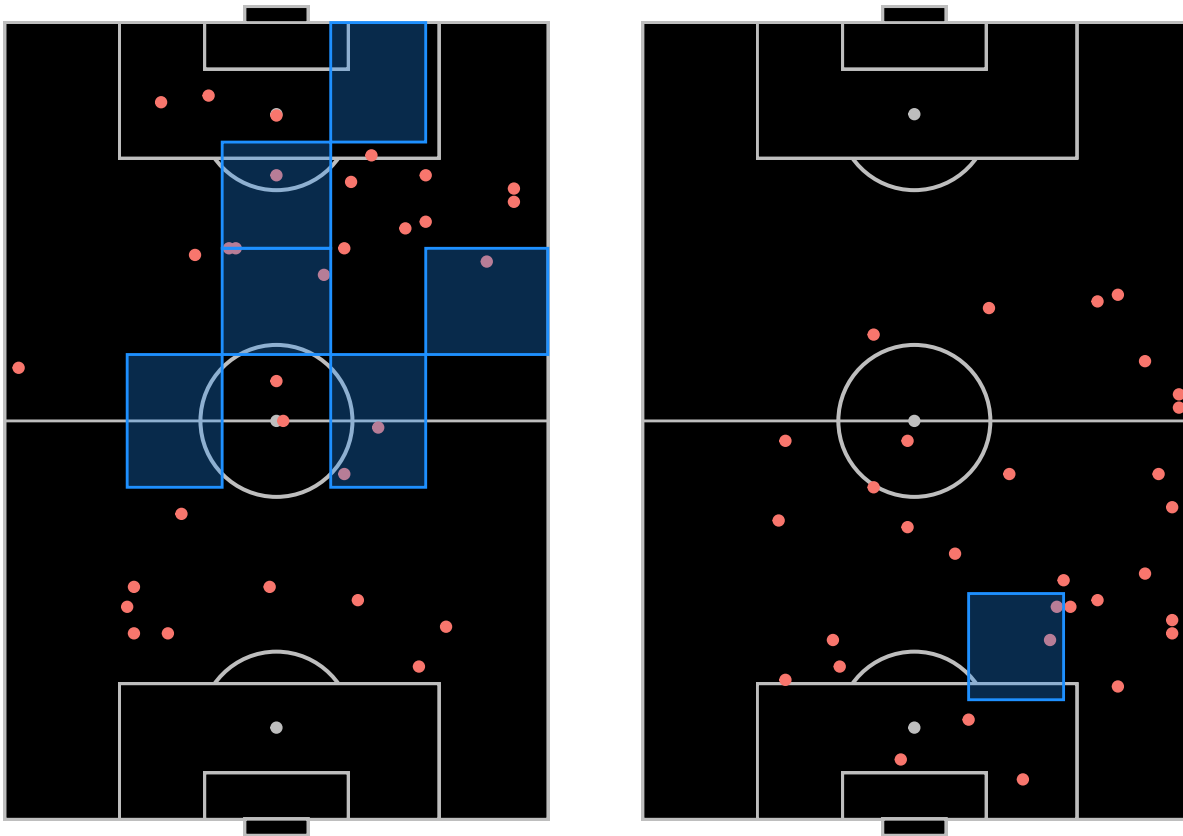
```
##  6        3961 N''Golo Kanté     France      34
##  7        3089 Kevin De Bruyne   Belgium     31
##  8        5485 Raphaël Varane    France      31
##  9        5613 Viktor Claesson   Sweden      31
## 10        5466 Oghenekaro Etebo  Nigeria     30
## # i 550 more rows
```

N"Golo Kanté, 34 Successful Ball Recov   Luka Modric, 44 Successful Ball Recove
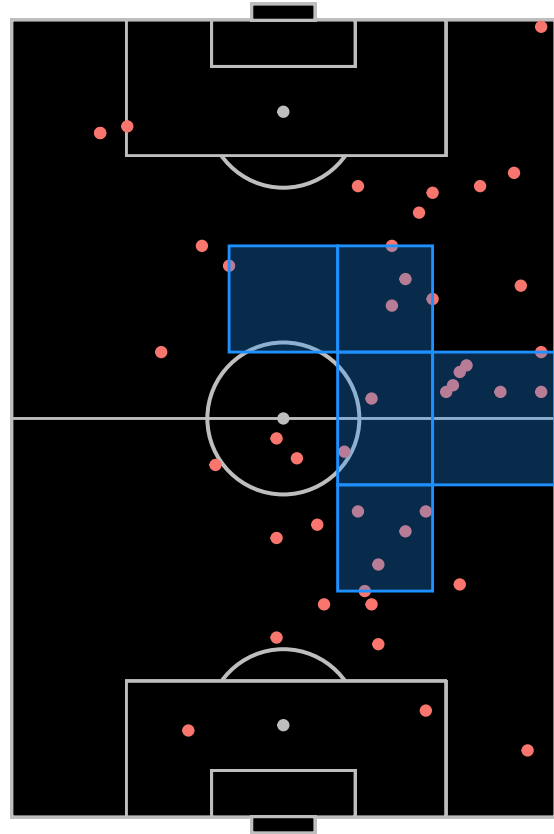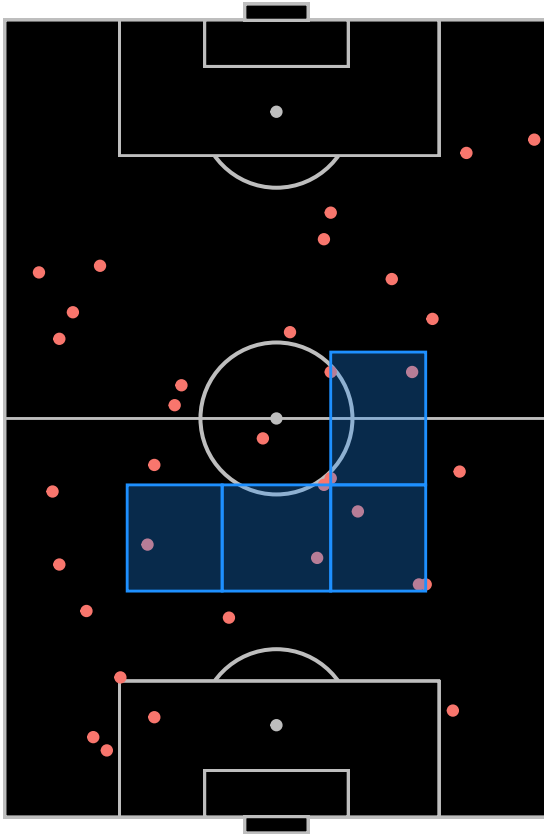
Kevin De Bruyne, 31 Successful Ball Re   Raphaël Varane, 31 Successful Ball Rec

PPDA

PPDA (Passes Per Defensive Action) is probably the leading statistic in measuring a teams the intensity and effectiveness of a teams high press. Looking only at the attcking 60% of the pitch, PPDA is calculated by dividing the total passes of the opposition by the total number of defensive actions (tackle attempts, interceptions, and fouls committed) perform. Lower the PPDA that teams emphasize pressuring there opposition with urgency high up the pitch. Higher PPDA shows that a team is content sitting back and on letting the opposition come to them.
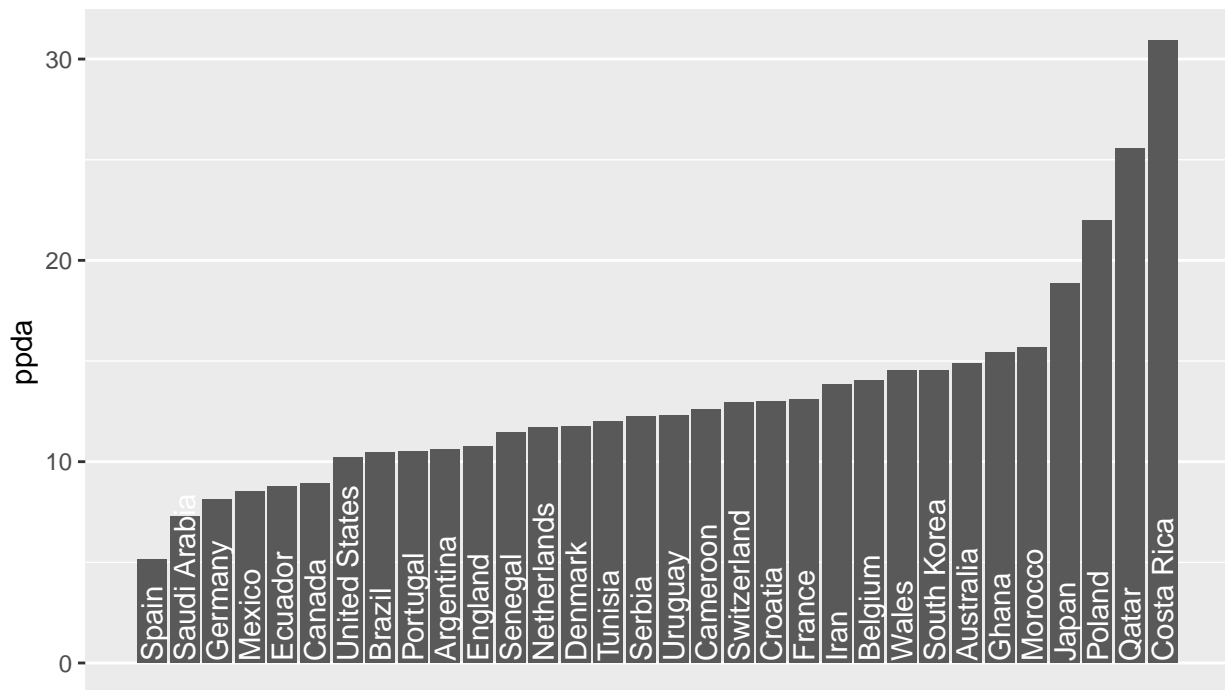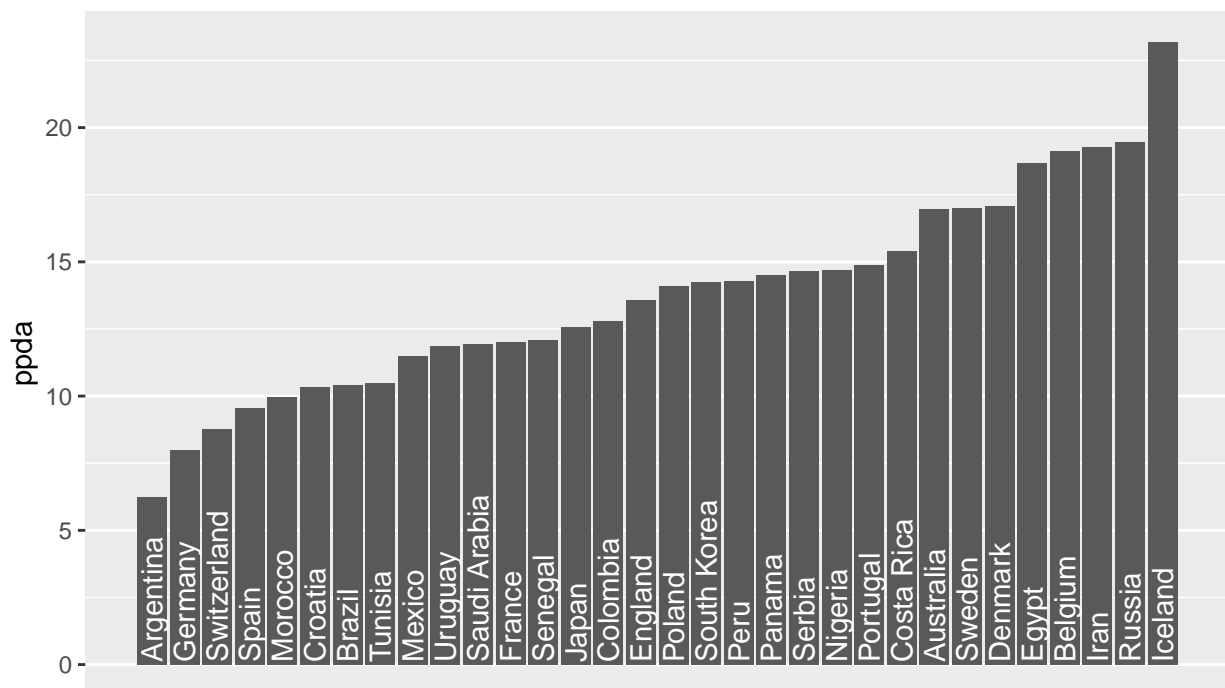
PPDA at Euro22
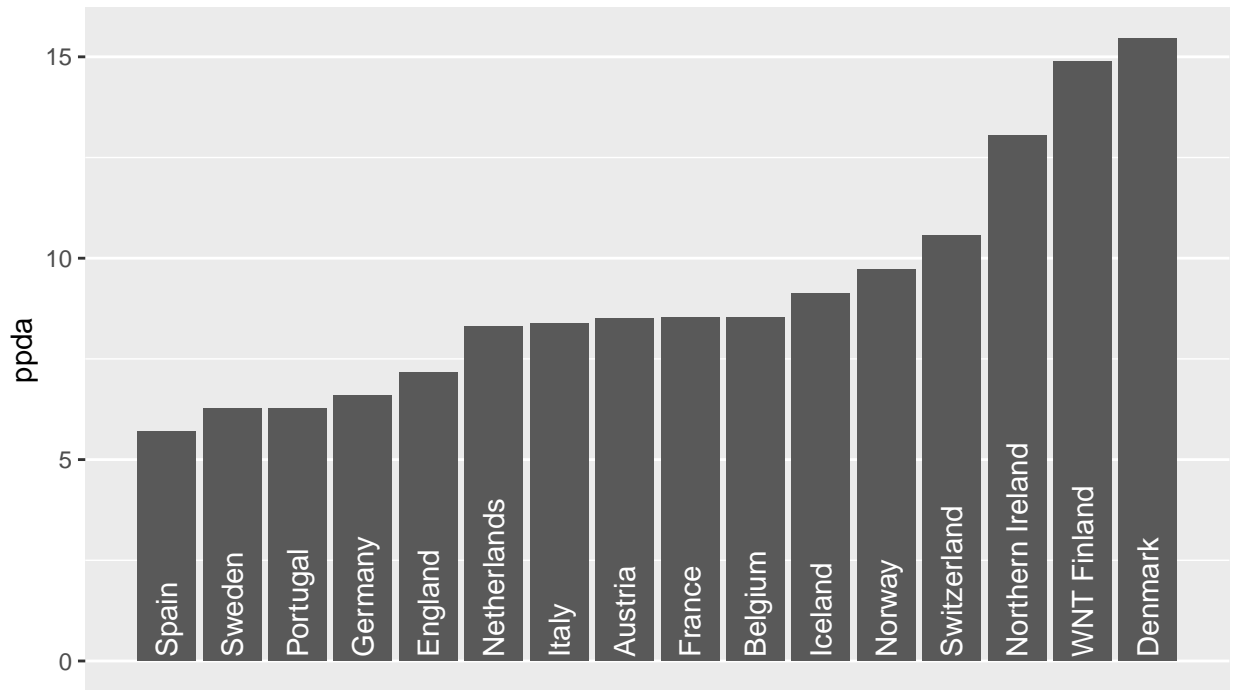
PPDA at World Cup 2019
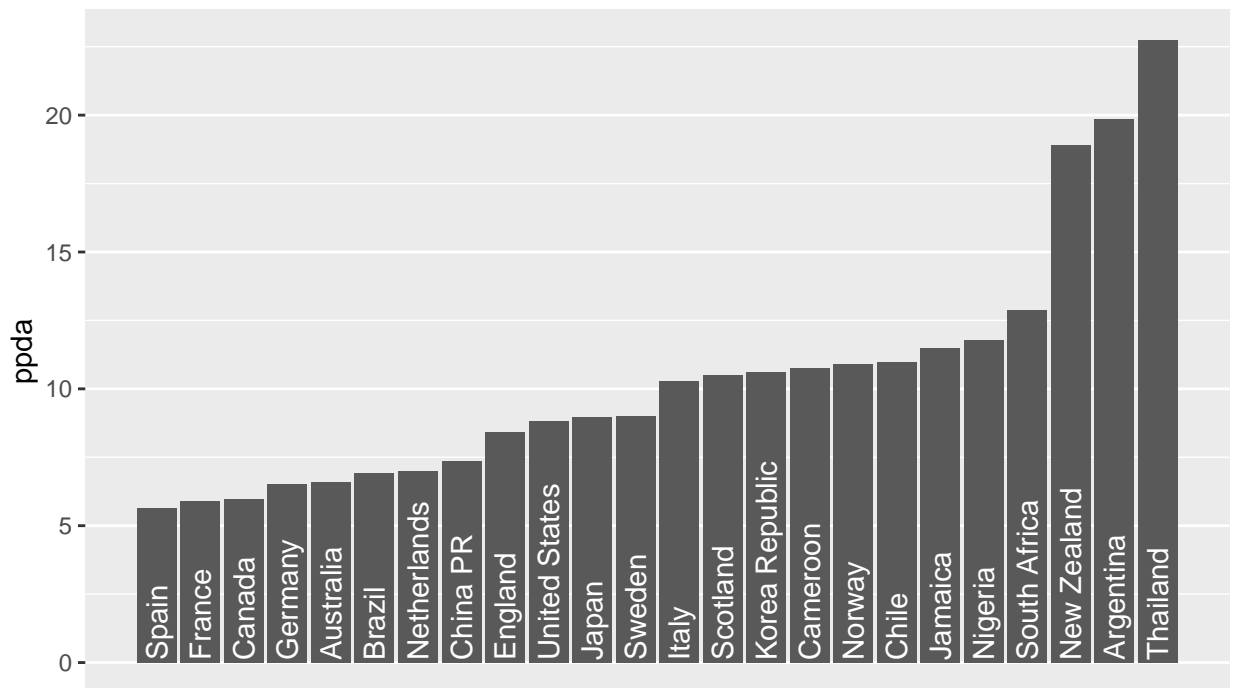
PPDA at World Cup 2022

PPDA at World Cup 2018

In all these tournaments, two nations consistently ranked high in PPDA: Spain and Germany. For Spain, an underrated point of their famous style, Tiki-Taka, is to immediately win the ball back once losing it (known as counterpressing), pressing the opponent high up the pitch to win the ball in attacking positions. For Germany, the style of gegenpressing is perhaps their most influential export of the last decade. The

entire system revolves around getting high up the pitch and intensely pressing to win the ball in advantagous positions. One of the best managers of this era, German Jurgen Klopp said, "No playmaker in the world can be as good as a good counter-pressing situation."