



INTER

2017/18 End of Season Player Performance Review

Data Science Group

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Motivation

Team Performance group highlighted overall strengths and weaknesses.

The Player Performance group takes a data-driven approach to:

- Identify high and poor performing players within the Inter squad;
- Identify transfer targets in all positions that enables Inter to:
 - Mitigate key asset losses;
 - Strengthen positions of vulnerability;
 - Add depth to the squad following Champions League qualification.

Key actions last year:

- Fended off €45m interest from Manchester United for Perišić;
- Added Škriniar at CB for €34m and Dalbert at LB for €21m;
- One-year loan for Cancelo at RB, with option to buy **not** triggered.



Competition: on and off the pitch

Since 2014, Barcelona's net spend of €450m is 3x that of Champions League winners Liverpool.

Hard to find competitive edge in data-driven football recruitment: complex invasion game with game-changing actions happening off the ball.

Combine Inter KPIs that suit our style of play with a systematic framework to value player actions.

Expected threat (**xT**) provides an intuitive way of valuing on-the-ball actions that move the game into a **state** with increased goal likelihood.

What's going wrong with Barcelona and Real Madrid's recruitment?



Meet William Spearman, Liverpool's secret weapon





Expected Threat (xT)

Why xT?

- Rewards individual player actions in buildup play – not just goals / assists.
- Rewards actions independent of the end outcome of the possession (each action is assigned a score in **isolation**).
- Rewards moving the ball not just into high-xG shooting positions, but also into **threatening** positions that can in turn lead to high-xG shooting positions with high likelihood.

How it works:

- Assign xT values to pitch **zones** that reflect threat (in terms of goals) of either successfully shooting or successfully moving at that location.
- Value action of a player moving the ball by computing the **difference in xT** between the start and end locations.



From Club Performance to Players

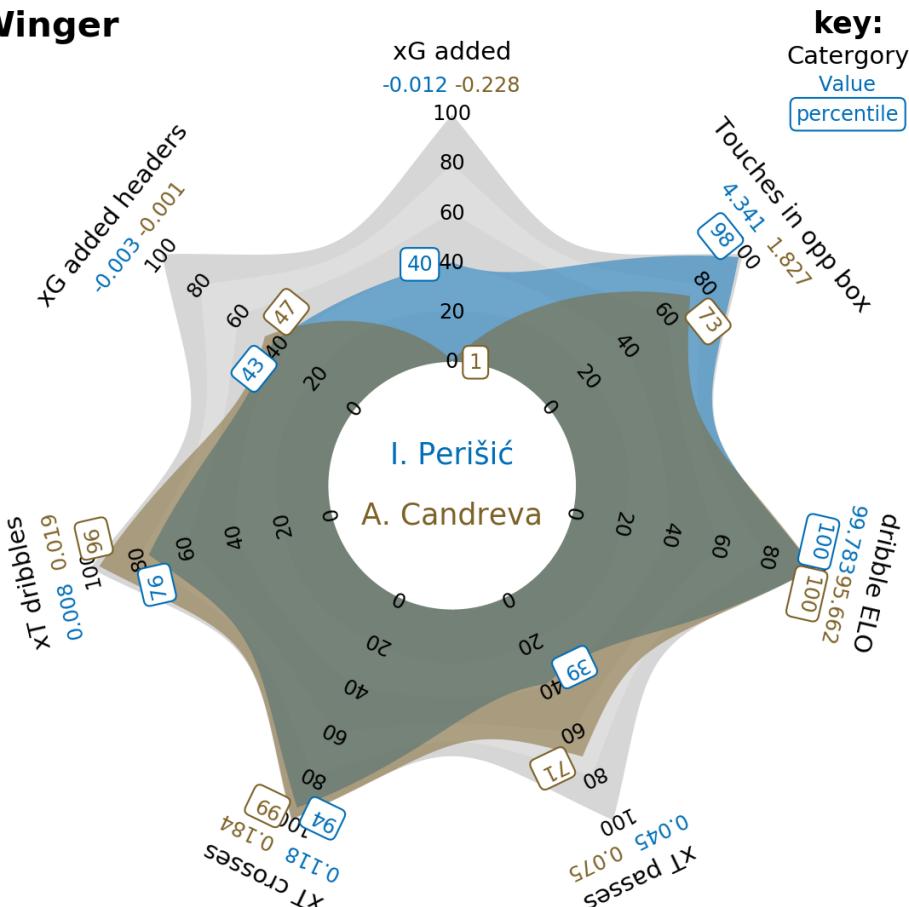
We focus our threat down both flanks and create chances through crosses

Opponents deviate from their usual strategy to target our left back



World class dribbling & crossing

Winger



Note: all stats are per 90 minutes if not specified

xT:

- Dribbling;
- Crossing;
- Passing.

ELO (a chess match of attack Vs defence):

- Dribbling.

xG:

- xG Added (Shots);
- xG Added (Headers).

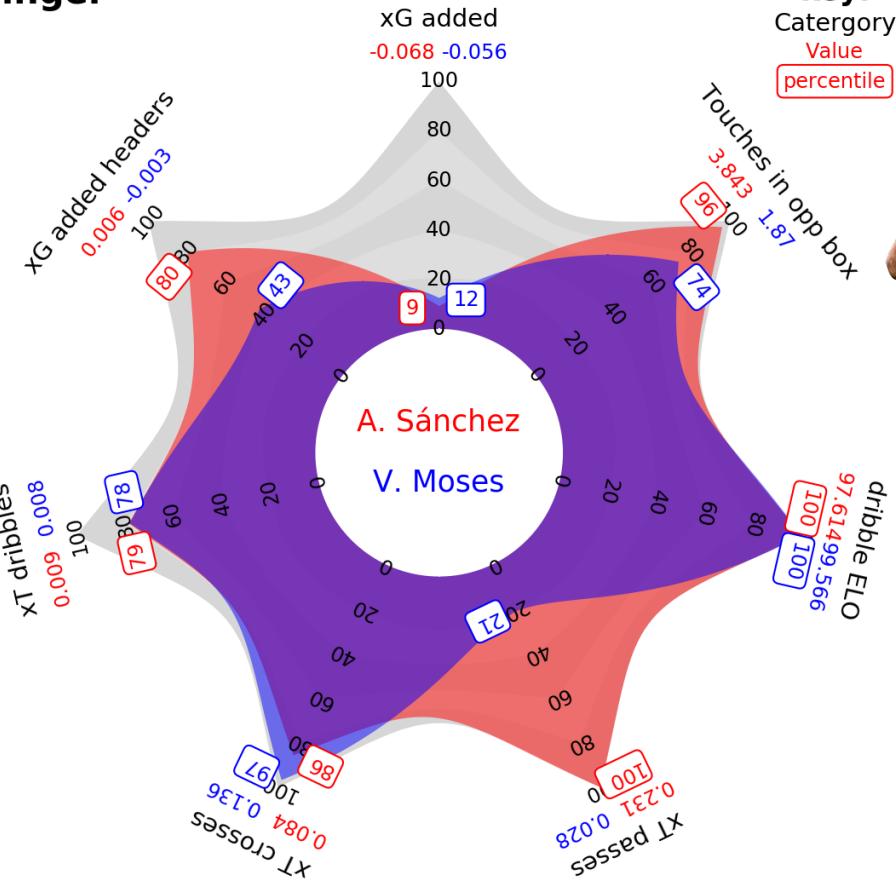
Traditional:

- Number of touches in opponent's area.



Perišić replacements & squad depth

Winger

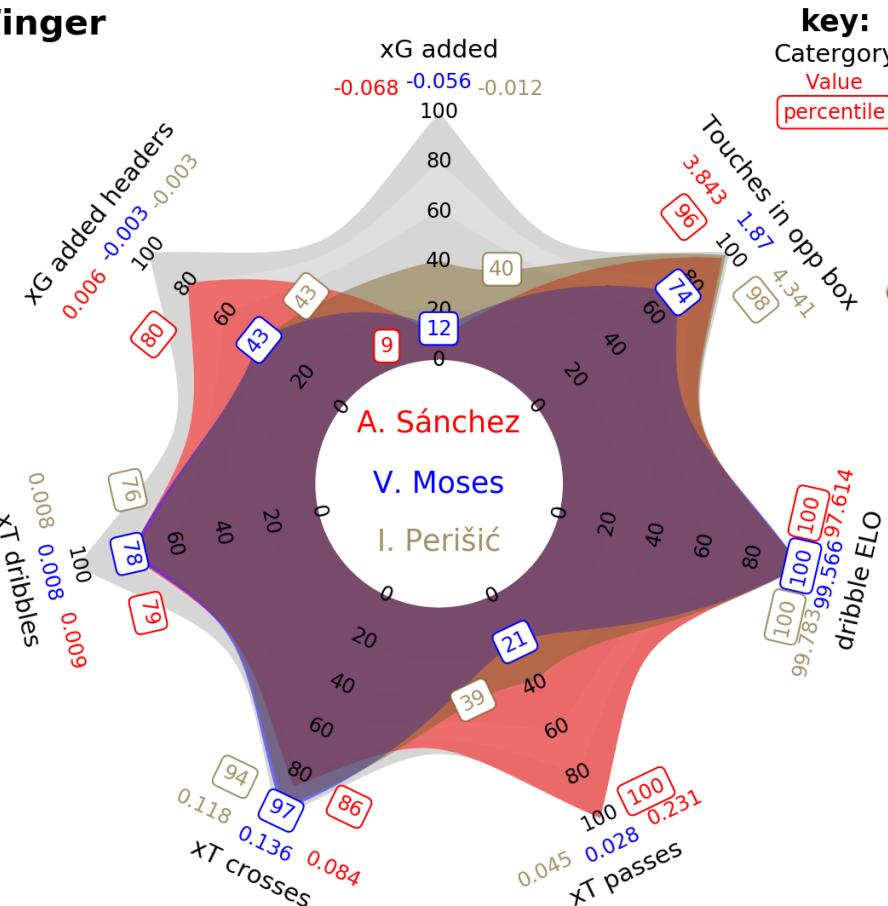


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Perišić replacements & squad depth

Winger



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Opponent's Delta xT strategy Vs Inter

As Lodve (and Maldini) says:

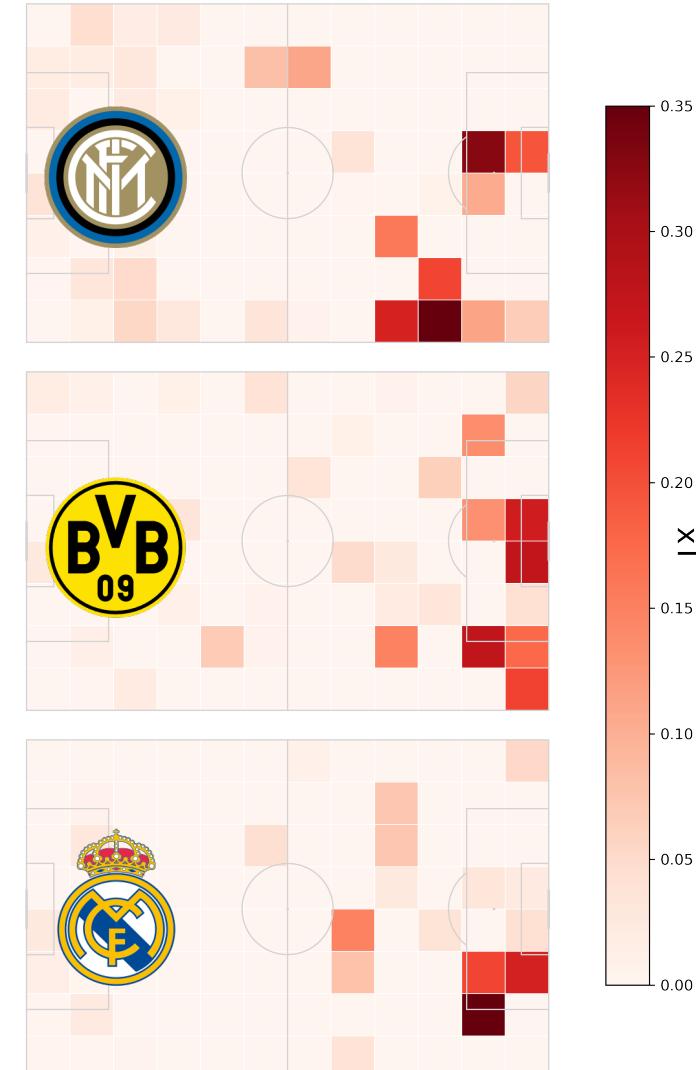
"If I have to make a tackle, I've already made a mistake"

On-the-ball events data are blind to off-the-ball context.

Indirectly observe opponent's Delta xT strategy:

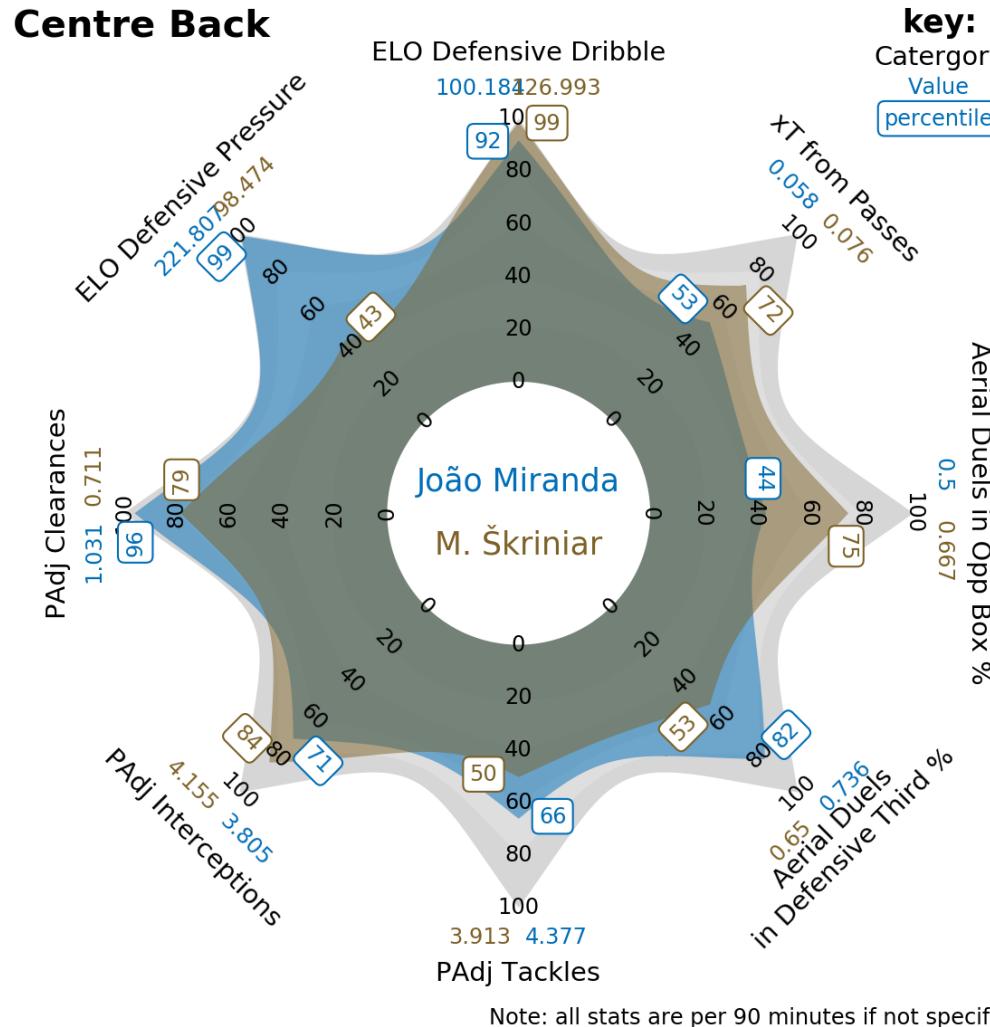
- Calculate average opponent threat per zone ex. Inter;
- Calculate average opponent threat per zone Vs Inter;
- Sum the threat deltas for all opponents.

D'Ambrosio preferred to Nagatomo, Dalbert, Santon at left back, despite being a **right-footed right back**.





Defenders that can (and can't) defend



Both centre halves are exceptional **one-on-one** defenders Vs dribble.

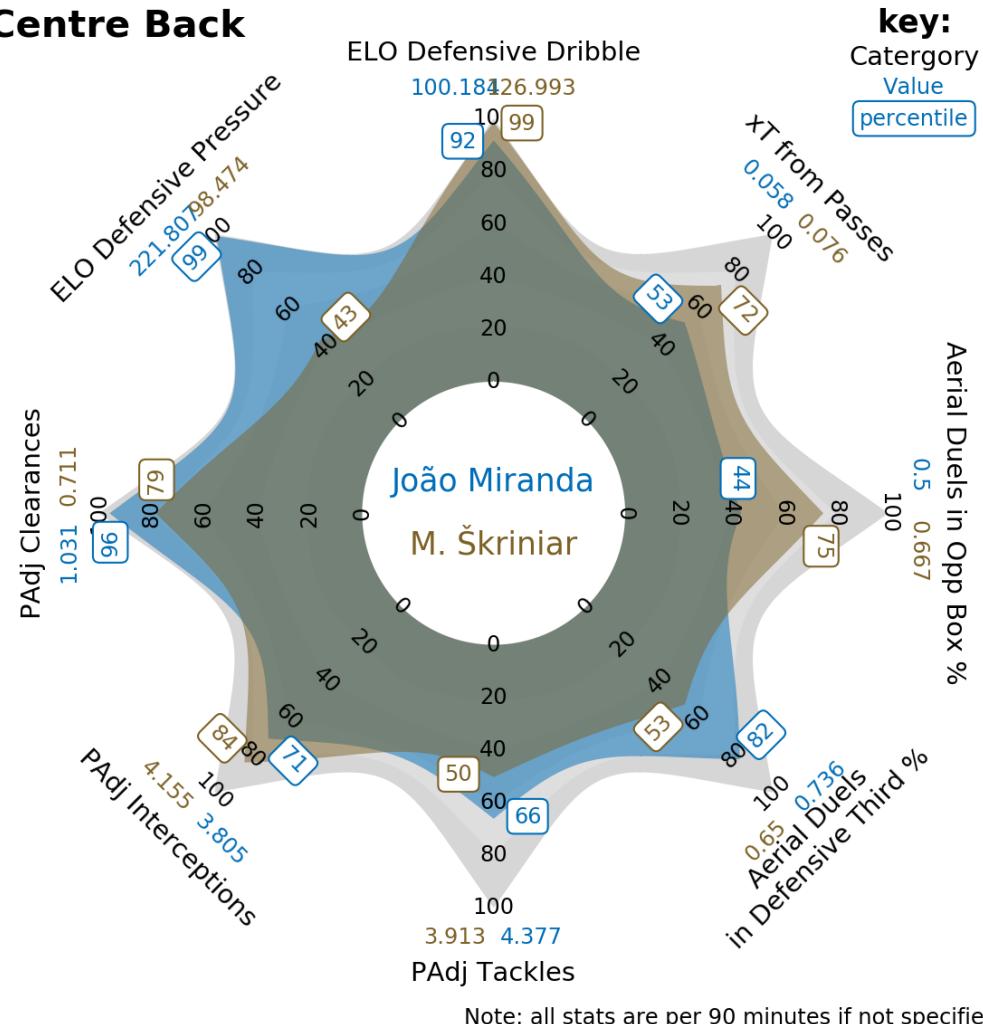
- Complement each other's weaknesses:
- Škriniar takes chances to **intercept** the ball but has ability to recover if his initial **pressure fails**.
 - Miranda **aerially dominant** at the back, the master of applying **physical pressure** and **clearing** rather than diving in.
 - Škriniar also offers **offensive** threat – both on the ground and in the air.

An Artist-Tank partnership.



Defenders that can (and can't) defend

Centre Back



The dream pairing for Inter Milan's defense

Yeah, we think we have a pretty good defense too.

By Édouard Germain | Aug 5, 2018, 3:45pm CEST

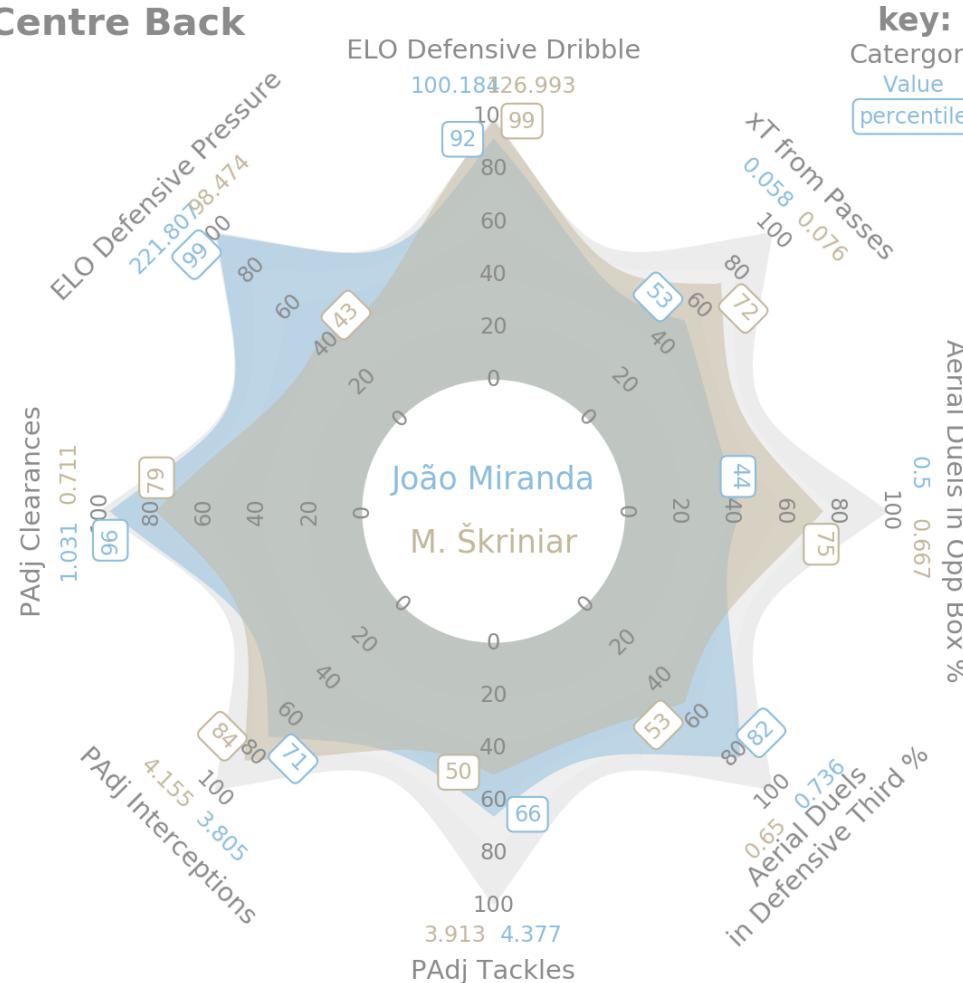
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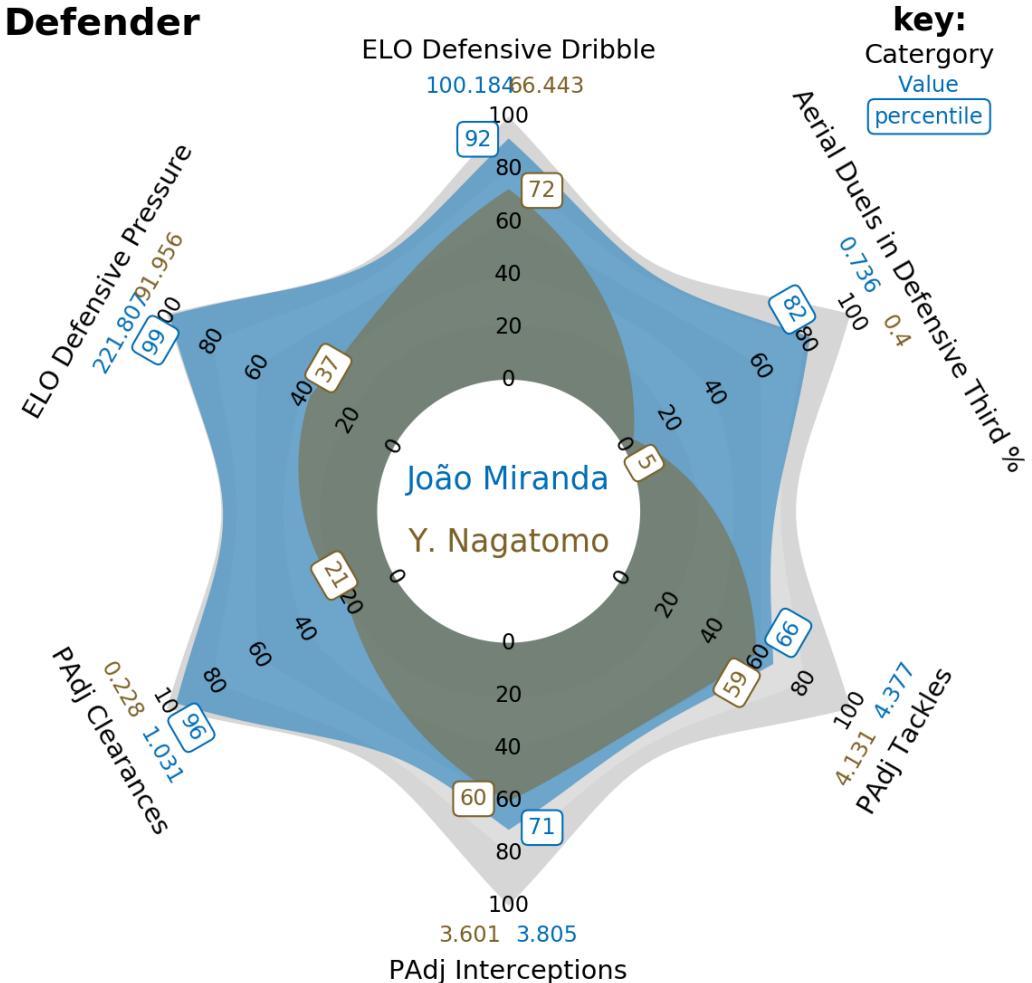
Defenders that can (and can't) defend

Centre Back



Note: all stats are per 90 minutes if not specified

Defender



Note: all stats are per 90 minutes if not specified



Links to Fitness Group

On-the-ball events only provide half the story: direct off-the-ball context

Link technical player attributes with physical: more CL games, more energy

Two years on... Are we happy with our left backs?



Next steps

Look for left and right back first team replacement candidates

Expand the range of metrics to cover a broader range of positions

Start with a realistic budget and simulate adding strength in depth in collaboration with the Team and Fitness groups (using Transfermarkt values)