

Assignment 1: Plotting Actions

Arin Rahim

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1 Introduction

The Spanish women’s national team stood for an amazing performance during the Women’s World Cup 2023 by going all the way to the final and securing a victory over England by 1-0. Along the way, they faced national teams like Sweden and the Netherlands in the knock-out stages. As a swede myself, I can’t help to feel disappointed over the loss against them in the semi-finals. However, as passionate FC Barcelona supporter, I could not be more than happy for the players representing my beloved team. One player that stood out for me was Aitana Bonmati, which was awarded the Player of the Tournament and the Ballon D’or for her performance during the 2022/2023 season. To highlight her overall impact, Pep Guardiola described her in 2023 as the women’s Iniesta and that he has completely fallen in love with her for the way she plays ¹. Aitana Bonmati’s impressive performance during the tournament, along with Pep’s high praise, sparked my curiosity about what makes her game so special. As a result, I’ve decided to analyze her playing style in greater detail.

1.1 Player Information

Bonmati, right footed, typically plays as central midfielder but can switch between the left and right central midfield position. As a box-to-box player, she contributes both offensively and defensively. During the tournament, she played as a right central midfielder.

2 Hypothesis

During the Women’s World Cup 2023, Aitana Bonmati Conca had higher expected threat (xT) in passing and ball carrying per 90 min compared to English midfielder Georgia Stanway, Swedish midfielder Kosovare Asllani, and Australian midfielder Kyra Lillie Cooney-Cross.

3 Method

Data from the Women’s World Cup 2023 was extracted from the Statsbomb open-data, which is accessible through the Python library mplsoccer². Python was then employed to filter and visualize the data using packages like pandas, numpy and matplotlib. Actions such as passing and ball carrying was extracted from the data for each player, and a pre-defined expected threat grid from Twelve³ was used for evaluating probabilities. A pitch-plot was used for Aitana Bonmati’s all passing and ball carrying actions and a tabel was then used to illustrate expected threat for each player throughout the tournament per 90 min, highlighting both passing and ball carrying contribution.

¹UEFA article on Aitana Bonmati

²mplsoccer library

³Twelve

4 Results and Discussion

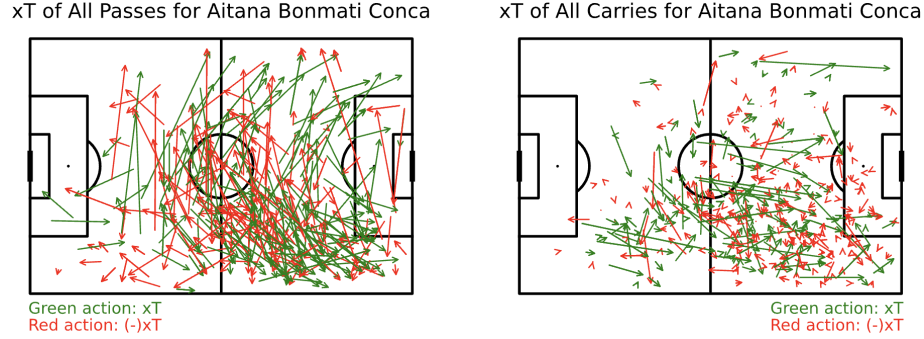


Figure 1: A view of Aitana Bonmati Conca’s xT for her passing and carries in the tournament. Red actions represent a decrease in expected threat, while green actions indicate an increase in expected threat.

Name	xT Pass P90 (%)	xT Carry P90 (%)
Kyra Lillee Cooney-Cross (AUS)	26.0213	4.0841
Kosovare Asllani (SWE)	29.5487	8.6359
Georgia Stanway (ENG)	17.8510	1.8245
Aitana Bonmati Conca (ESP)	17.8000	5.8657

Table 1: Comparison between the players xT per 90 min for their passes and carries in the tournament.

Analyzing Aitana’s xT for her passes and carries during the tournament reveals that most of her actions originated from the right side, which was her position in every match. She utilized a combination of both long and short passes, with the majority directed either to the right side of the final third or as longer passes to the left side. However, most of her carries were towards the right side, where she initiated her attacks towards the goal. Some of the carries even moved up the ball from the middle of the pitch to the final third.

All players were specifically chosen because they reached the semi-finals and play in similar positions on the field. However, the xT for each player’s respective actions revealed that Kosovare Asllani had the highest xT for both passes and carries. Although she played least minutes of the compared players, her xT value for passing per 90 minutes was approximately 29.5%, while for carries it was around 8.6%. This means that her passes and carries increase her team’s chances of scoring by 29.5% and 8.6%, respectively. Aitana had the lowest xT value for passing but the second highest for carries. In her defense, she plays more as a box-to-box midfielder compared to the others, who have more offensive roles, which might be an explanation to her xT values.