Course ID: 1RT001 11813



# Player Analysis: Filippa Angeldal Mathematical Modelling of Football

## Hypothesis

The 2023 FIFA Women's World Cup was yet another successful tournament for Sweden, earning their 4th consecutive medal in the last 5 years. One key player behind this success is Filippa Angeldal with her ball winning abilities, as well as her attacking threat. In this summers World Cup, however, Angeldal only managed to score 1 goal (from a penalty) and 0 assists, and did not get as much praise as during previous tournaments. I still think she had a big influence in her box-to-box role and the aim of this analysis is to find support for that claim.

# Aggregated Passing Network for Sweden 2023 FIFA Women's World Cup Andersson Rubensson Blackstenius Musavic Björn Rytting-Kaneryd Until first substitution of every game. | Minimum 5 passes.

Figure 1: Pass network of all passes made by Sweden in the tournament, focusing on Angeldal in particular.

Created by Olof Ekborg-Tanner for Mathematical Modelling of Football (1RT001 11813)

## Analysis

Figure 1 illustrates the passing network of all Sweden matches combined, excluding the Argentina match as the lineup was heavily rotated. We find that while the other central midfielder, Rubensson, on average had a very central position in the build up, Angeldal moved out to the right to be closer to Björn, Rytting-Kaneryd, and Asllani, creating passing triangles and combinations to gain advantage on the right wing. Besides the passes in the back line, the combinations between Angeldal and these 3 players were the most common passes for the Swedish side, and by conducting a one-sample one-sided t-test with significance level of 95%, we can

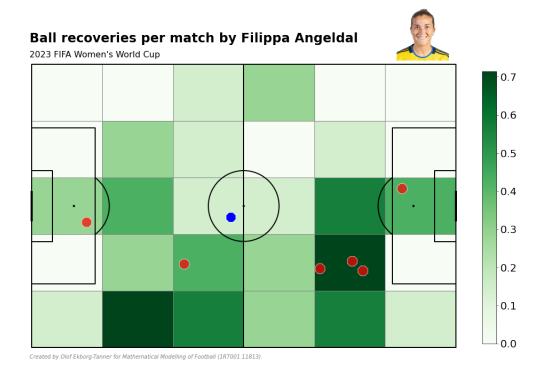


Figure 2: Average Ball Recoveries made by Angeldal during the tournament, highlighting recoveries that lead to a shot or a goal within 15 seconds.

conclude that Angeldal both made more passes than the starting XI average (p = 0.034), and received more passes than the starting XI average (p = 0.009). This highlights her importance in Sweden's build-up play.

As a box-to-box midfielder it is, however, not only the attacking threat that is important, the defending abilities are just as valuable. Recovering a loose ball will regain the possession for the team, and can also enable opportunities for counterattacks. In Figure 2 we see the average amount of ball recoveries Angeldal made per match in different areas of the pitch. It is quite clear that Angeldal lives up to the box-to-box definition, recovering the ball in almost all areas of the pitch. Interestingly, many of her ball recoveries are in the areas right outside the opponents box. Several of these are likely from rebounds or clearances from set pieces or shots, which would enable Sweden to maintain their momentum and threat towards the goal. From the recoveries in these areas, Sweden managed to create a shot within 15 seconds from the ball recovery at 4 occasions during the tournament. From the areas further down the pitch, another 3 ball recoveries led to a shot within 15 seconds. Her total of 7 of these shot-enabling recoveries is the best among the Swedish players, significantly better than the team average of 3.18 ( $p = 8.6 \times e^{-5}$ ). One of these recoveries even resulted in a goal (the 1-1 goal vs South Africa). This situation also showcases the first point of this analysis, as her recovery is followed by passes between the right side player until ultimately creating the scoring opportunity.

Summarised over the entire pitch, she recovered the ball on average **8.33** times per match, which not only is the highest in the Swedish starting XI, it also places her in the **90th percentile** among both midfielders (average of 4.46) and overall in the tournament (average of 4.59), **1.5** standard deviations above average in both segments. This shows that her ability to recover the ball was one of the absolute best in this tournament.

## Conclusion

Even though Filippa Angeldal only scored 1 penalty goal during the World Cup, her importance for Sweden cannot be emphasised enough. With her central role in the passing build-up and top ranked ball recovering abilities, she dominated the Swedish midfield and can take pride in a well played tournament and bringing yet another medal back to Sweden.