**Women's Soccer**

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The main point of this project is to analyze and deep dive into the data from the women's soccer team of St. Thomas University. The objective is to develop models to visually illustrate insights about physical, technical and tactical and unopposed passing drills key performance indicators. In order to achieve an efficient data analysis the most valuable data that is available was selected. This includes past data about game results and statistics and sensors. The “PlayerMaker” sensors were applied to all the players in the 2019 season. These sensors and proprietary software detect every ball touch and build an accurate player profile. The advanced technology gives data to measure passes, runs and interceptions. Power BI application and Microsoft Excel were used for the collection of information and graph calculations. The models created are valuable and can help the coaches to make better and smarter decisions considering different situations in games and trainings. In addition, the main goal and purpose of this project is to help and show the coaches of St. Thomas University how they can implement the valuable data that the sensors are providing and apply them in order to get successful results on the following matches and seasons.

This project can change the life of the team and the coaches. When considering the rules of the game and the speed of it, decisions have to be made as quickly as possible. The right decision at the right time can make a difference in a game and it can change the whole momentum, it can lead to a goal or even to a win. Coaches must be ready to take the right decisions at the right time based on the data that it will be given to them. With this project they will be able to use analytics successfully as there are valuable individual player and team insights which will differentiate and give an advantage to St. Thomas University Women’s Soccer Team from others. The data gives information about every single player’s strengths and weaknesses and also the team’s strongest key performance indicators and the weakest ones.

After the project, the main reasons why players perform highly or poorly were found out what can be done in order to avoid poor performance and maximize great performance with great results. The main goal of this project is to make sense of the data that the sensors have collected and give these insights to the coaches in order for them to make better decisions.

It is really impressive and extremely helpful for coaches to have on their hands all this valuable information of every single player on the team and knowing your player’s abilities and strength as well as their weaknesses and use them to boost their performance and get the maximum out of their talent. Most importantly, it is important to be aware of the weaknesses of your players because from the moment you can see the player’s weak spots on their gaming then you are able to work on them and try to minimize it as well as try to turn it into strengths in the future. A really important factor that coaches will take in consideration is that with all this information they will be able to establish the training based on the facts we were able to capture in order for training to become more efficient and more effective on the players. The coaches will know what the team needs improvement as a whole and individually so practices can be set up smarter in order to work on the metrics that they need more and even set up individually or small group practices in specific KPIs that selected players need improvement.

It is highly important for the coaches to take in consideration all the valuable information that they have access with the sensors and that was explained in this project and try to implement them into their coaching for better results.

One of the most important recommendations that we suggest is to practice more intensively before playing an away game. There is a clear deficiency in finishing correctly the plays when the team plays away games. The statistics show that when STU plays away, they have more shots but they score less than when they play at home.

This problem can be solved by training definition in a deeper level before the away game. Also, there has to be more practice when playing at home in generating more goals. It would be ideal to have the goals opportunities that the team creates at home games in away games also.

Another critical insight that can be extracted from the data is that the highest distance covered on the women’s soccer team is coming mostly from the center midfielders and the difference between the other player positions is high. In today’s soccer, the outside backs and winger should have the same and even more covered distance than the center midfielders as they have to run the line and attack and also to defend at the same time.

Coaches should work more on the fitness of the outside players in order to be in a position to help the team on the attacking end as well as the defending end. The benefits of increasing the fitness of the outside players will definitely positively affect their gaming as they are going to be more balls served on the box which will increase the chances of scoring goals and increase the number of assists and key passes for goals.

Another gaming factor that was captured and that needs to be fixed is the ball possessions during the losing games. Based on the data, in every match that the STU team didn’t touch the ball a lot the result wasn’t the one desired. Coaches need to take action while the game is not going as expected and make some changes at the right time, meaning bringing on the pitch players that can keep the ball to their feet and also touch the ball around in order to find moments and create dangerous attacks during the game in order to score and overcome the bad result.

A really interesting insight that I came up with is the average of total time on the ball where the highest time was coming from the left back of the team instead of a center midfielder. Usually, center midfielders are the ones that tend to keep the ball most on their feet as they have to organize and structure the game based on the team’s wants.

I would kindly recommend the coaches to create drills during the training that will make the center midfielders keep the ball more time on their feet by providing them with extra touches and giving them the opportunity to feel more comfortable and aggressive while having the ball on their feet. It is crucial to make the players during the trainings feel like they are playing a game and make them face gaming and realistic situations in order to prepare properly for the upcoming game

All the recommendations made are based on the use of data that was received from the sensors and I believe that will affect the gaming of the women’s soccer team of Saint Thomas University in a positive way. I strive to help the team to reach their individual and team’s objectives as well as their goals and finally to take the successful path that they deserved.