**Line FallBack Movement Strategy**

The brief explanation about the Line FallBack movement strategy that we coded is as follows:

Pseudocode:

1. Get the danger level zone (where the ball is)

dangerLevel = getDangerZone(ball\_x\_coordinate)

* 1. 0 <= x <= 50 → level 0
  2. -20 <=x <= -1 → level 1
  3. -30 <= x <= -19 → level 2
  4. -40 <= x <= -29 → level 3
  5. -50 <= x <= -39 → level 4

1. Our team player who is closest to the ball will run towards opponent’s player with the ball and will try to clear the ball.
2. if( dangerLevel == 0 )

→ 4 closest player to the ball (apart from the above player mentioned in step

2 ) will form a line with their y - coordinates as unchanged and their

x-coordinates as ball\_x\_coordinates - 2. These players will try to block

and clear the ball.

1. if( dangerLevel == 1 )

→ 6 closest player to the ball (apart from the above player mentioned in step

2 ) will form a line with their y - coordinates as unchanged and their

x-coordinates as ball\_x\_coordinates - 2. These players will try to block

and clear the ball.

1. if( dangerLevel == 2 )

→ 8 closest player to the ball (apart from the above player mentioned in step

2 ) will form a line with their y - coordinates as unchanged and their

x-coordinates as ball\_x\_coordinates - 2. These players will try to block

and clear the ball.

1. if( dangerLevel == 3 )

→ 8 closest player to the ball (apart from the above player mentioned in step

2 ) will form a line with their y - coordinates as unchanged and their

x-coordinates as ball\_x\_coordinates - 2. These players will try to block

and clear the ball.

1. if( dangerLevel == 4 )

→ All the players (apart from the above player mentioned in step

2 ) will form a line with their y - coordinates as unchanged and their

x-coordinates as ball\_x\_coordinates - 2. These players will try to block

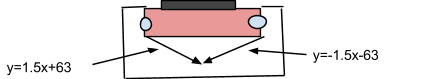
and clear the ball.

**Triangle Net Strategy**

In this strategy when the team fall back they form a triangle with 6 players. 3 players on each side of the triangle at x=-46,-44,-42.

2 Players at the below part of the left and right side (blue colored part ) and 1 player will be man marking the opponent in the part below the triangle and the last man will be chasing the ball.

The brief explanation of the Triangle Net strategy that we coded is as follows:



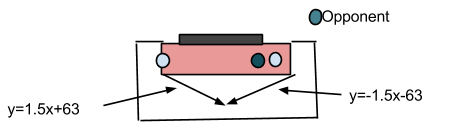
Create 2 arrays one on the left side and the other on the right side of size 3.

Position of index in array will decide the position on the side of the triangle.

So when the team does fallback the would be filling themselves in the array such as if the player comes first is goes at the base of the array and so on. if the left array is full then player goes in the second array. Players will fill the array simultaneous depending whether left position is closer or right.

Out of the remaining players, two players each of them will stand in the circle as denoted in the above image.

When opponent player enters the red area as marked in the image the players in the circle will try to mark the player and intercept the pass he is going to receive.Like if the ball is on the right side then the right player will stand on the right side of the opponent.



Pseudocode:

If (opponent has ball And Not Kickable)

if(Tackle Player with ball)

return

if(Intercept)

return

else

if(better than threshold)

Two strikers chase ball

Remaining Fall to Penalty Box

Fill the 2 Arrays to cover the penalty box in Form of Triangle

And Those Left placed on the left and right side of the goalkeeper.

If(ball with us or ball outside the field or ball !with opponents)

Empty the 2 Arrays.