

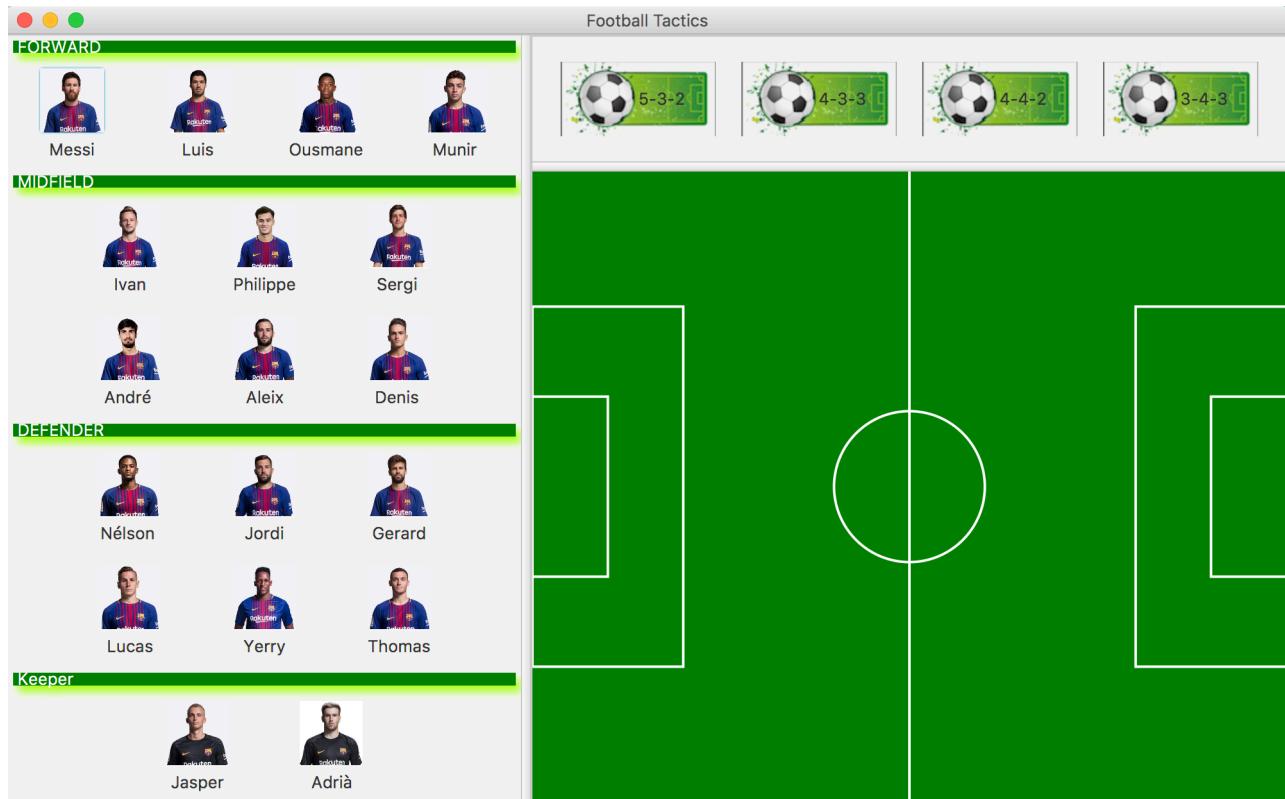
Football Tactics Simulation Software

User Manual

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1. When you open the software, you will see the following interface:



2. Then you can choose the football formation you want to use:



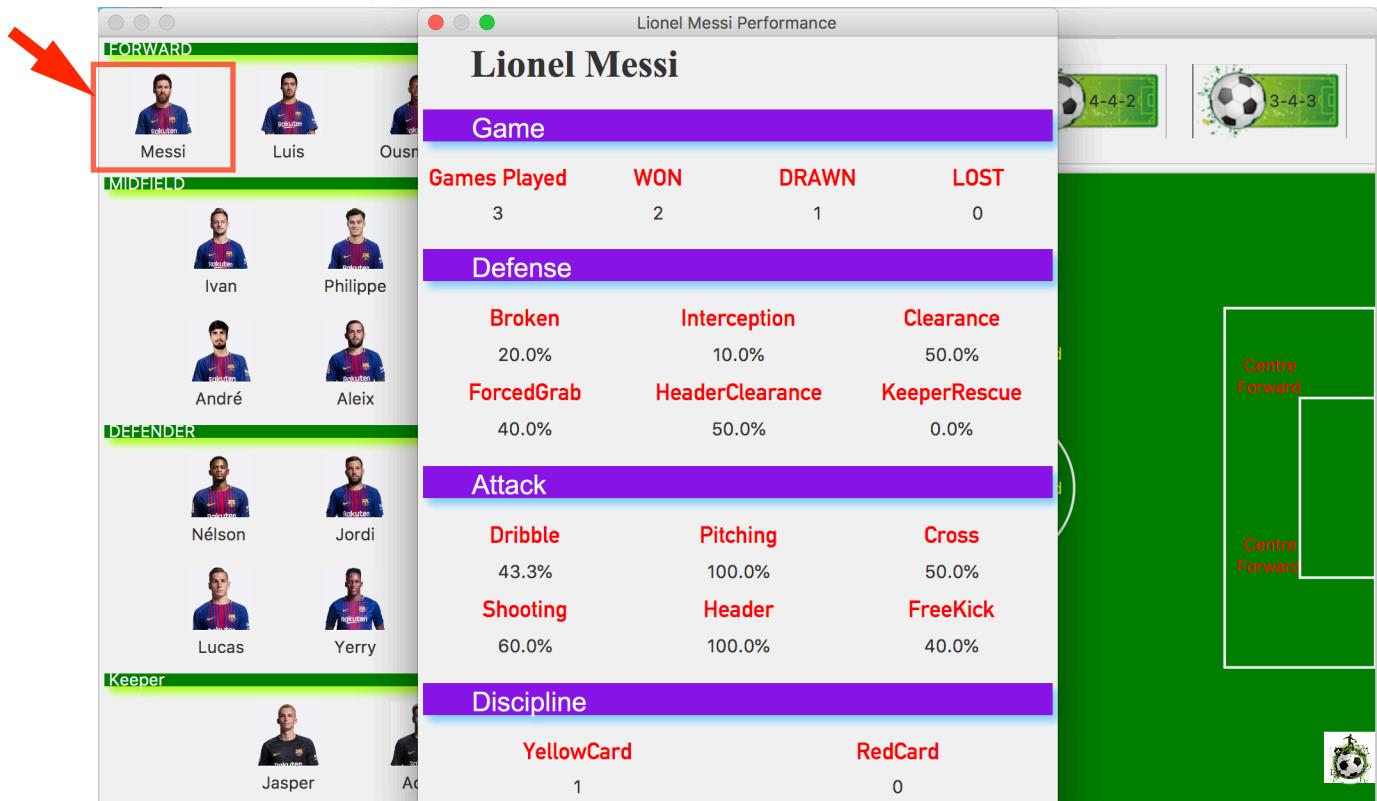
Tips: There are four kinds of football formation: 5-3-2, 4-3-3, 4-4-2, 3-4-3

For example, 5-3-2 means: 5 defenders (blue), 3 midfields(yellow), 2 forwards(red).

You can check each formation by clicking corresponding button. The formation will appear on the greed football field. The following pictures are other three formations



3. Then you can click the image of players to check their Performance:



In the Performance interface, you can check the following Performance of the player.

1. Game :

Game played: the total number of games he attended.

WON/DRAWN/LOST: the **total number** of games he won/ drawn/lost.

2. Defense :

Broken/Interception/clearance/ForcedGrab/HeaderClearance/

KeeperRescue:

The **average success rate** of broken/Interception/clearance/

ForcedGrab/HeaderClearance/KeeperRescue.

success rate= numbers of successful broken / numbers of attempts to broken

average success rate= Σ every success rate/total number of games he attended

3.Attack :

Dribble/Pitching/Cross/shooting/Header/FreeKick:

The **average success rate** of Dribble/Pitching/Cross/shooting/Header/FreeKick.

success rate= numbers of successful dribble/numbers of attempts to dribble.

average success rate= Σ every success rate/total number of games he attended

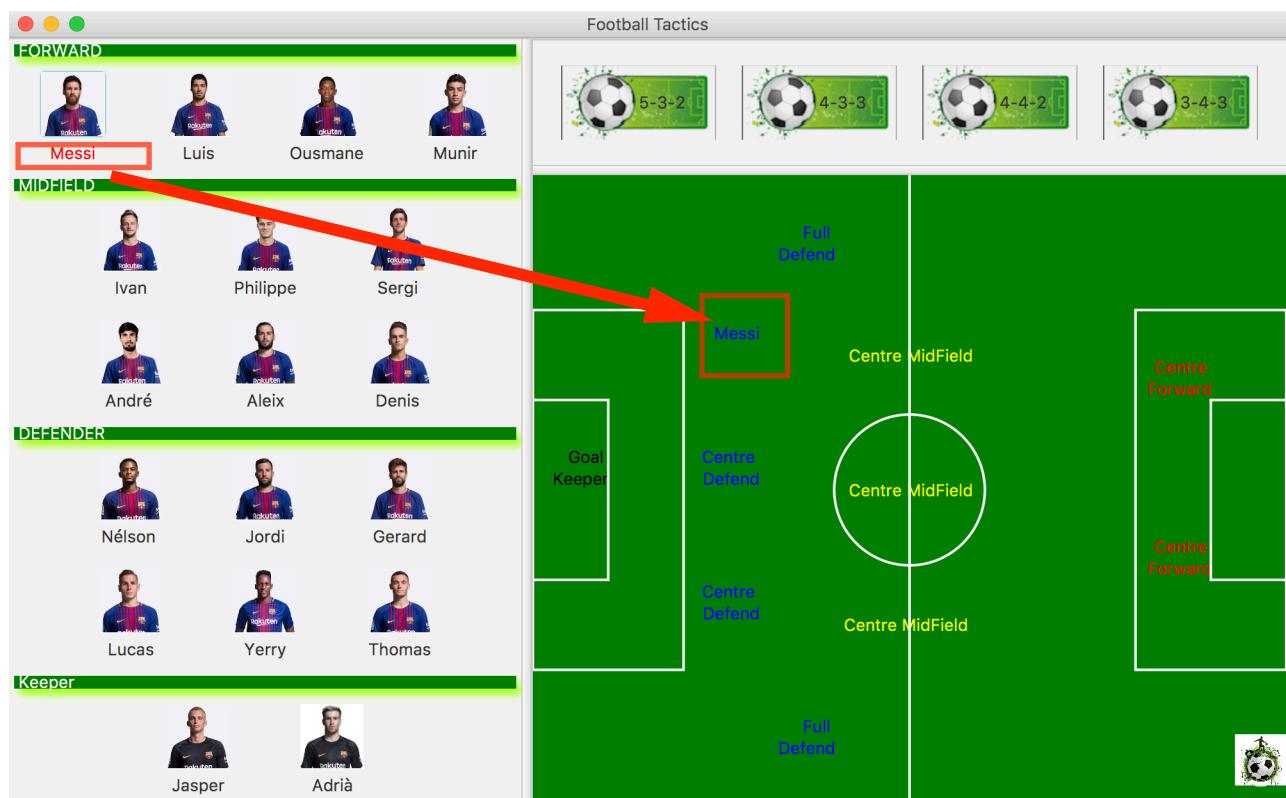
3.Discipline:

Yellow/Red:

The **average number** of Yellow/ red cards .

average number= Σ number of yellow cards every game/total number of games he attended

4. Then according to the Performance of Players and recommended position, you can drag their names to the corresponding position in the green football field as you want.



Tips: When a name was dragged, it will turn red to remind you that it has been used, but you can still drag and put it again. And if you want to change the player on a position, just drag other player's name to replace the old one on that position.

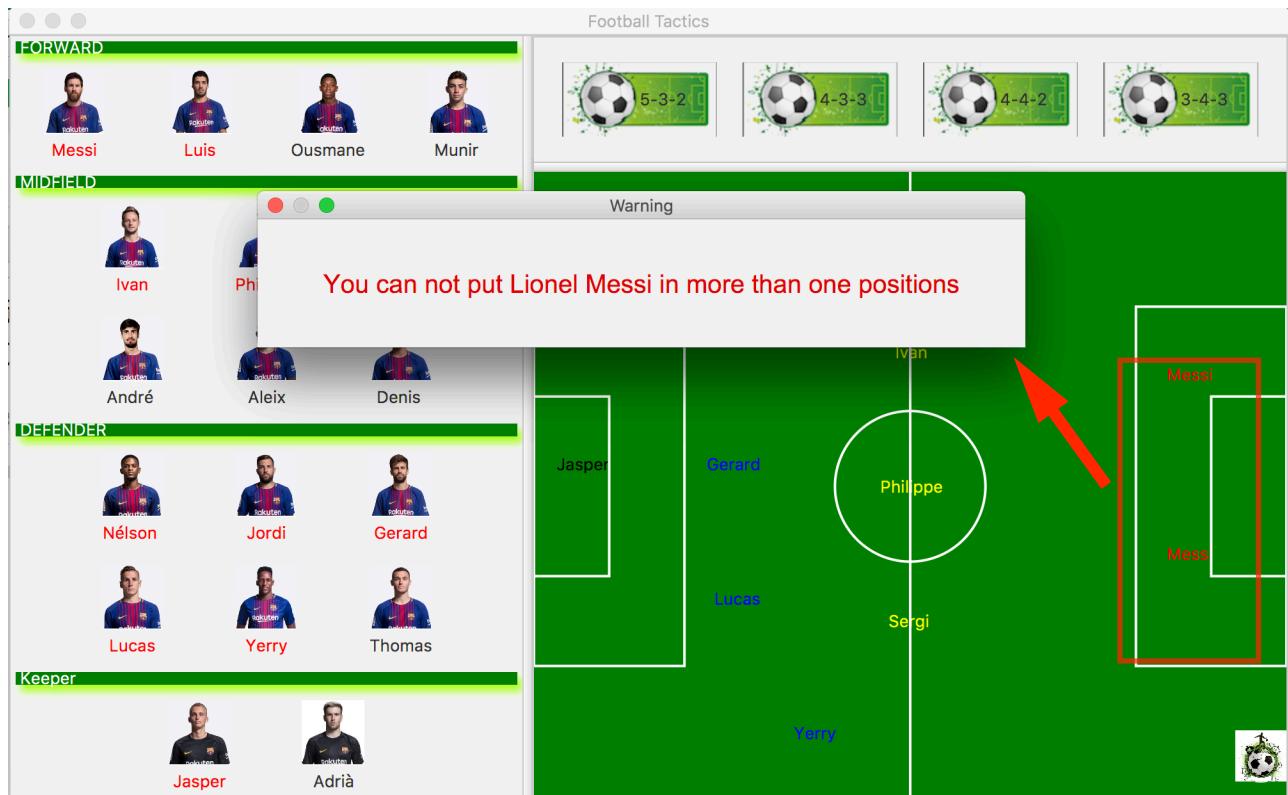
Do not worry that one name will be put into two positions. This problem has been fixed. The solution will be shown later.

5. When you finish your selection, click the image button in the lower right corner to evaluate the tactics you chose.



6. In order to prevent the following two problems, you maybe see a alterBox. 1) one player is placed in multiple positions. 2) there is no player in some positions.

Problem1: The alterBox will promote which player is used repeatedly.



Problem 2: The alterBox will promote there is no player in some positions.



6. After doing the selection correctly and clicking the button, you will see the evaluation of your tactics which is calculated in terms of every players and formation you selected.



In the Evaluation interface, you can check the following Performance of your tactic.

1. Attack, Defense :

The **average success rate** of attack/ defense of your tactic.
 $\text{success rate} = \text{numbers of attack} / \text{numbers of attempts to attack}$.

2. Discipline :

The **average number** of red/ yellow card get

3. Evaluation:

there will be three kinds of evaluation :

Please check your choice, something is wrong($0.3 > \text{result}$)

You can improve it... ($0.3 < \text{result} < 0.5$)

Good Job($\text{result} > 0.5$)

It will show different evaluation according to the result of attack and defense.

Calculate Methods for attack, defense and discipline:

This software use weighted average algorithm to calculate.

And the different formation has a different weight of defense and attack.

For example, for formation 4-4-2:(4 defenders, 4 midfields, 2 forwards)

success rate of defense=

average defense success rate of every defender *(60% / 4)+
average defense success rate of every MidField *(35% / 4)+
average defense success rate of every Forward *(5% / 2)

success rate of attack=

average attack success rate of every defender *(10% / 4)+
average attack success rate of every MidField *(50% / 4)+
average attack success rate of every Forward *(40% / 2)

The following tables show the weight distribution of every formation.

Weight distribution for Formation 4-4-2		
	Defense	Attack
Defender	60% / 4	10% / 4
MidField	35% / 4	30% / 4
Forward	5% / 2	60% / 2

Weight distribution for Formation 3-4-3		
	Defense	Attack
Defender	50% / 3	5% / 3
MidField	40% / 4	25% / 4
Forward	10% / 3	70% / 3

Weight distribution for Formation 4-3-3		
	Defense	Attack
Defender	60% / 4	10% / 4
MidField	30% / 3	20% / 3
Forward	10% / 3	70% / 3

Weight distribution for Formation 5-3-2		
	Defense	Attack
Defender	75% / 5	15% / 5
MidField	20% / 3	25% / 3
Forward	5% / 2	60% / 2

Tips: Since the above algorithm and data are fictitious, there is no guarantee that the result is true. It is just a simulation software. But The overall trend is realistic.

For example, as picture shown in part 6, when we put players in proper positions, the result is good. But if we put defenders in forward positions and put forwards in defender positions, we will get the result shown below which the success rate of attack and defense are apparently lower.



And if we use formation 4-3-3 whose attack is more competitive than formation 5-3-2. And the choice of players are almost same. The following

picture shows the result. We can see the success rate of attack is higher and the success rate of defense is lower.

