

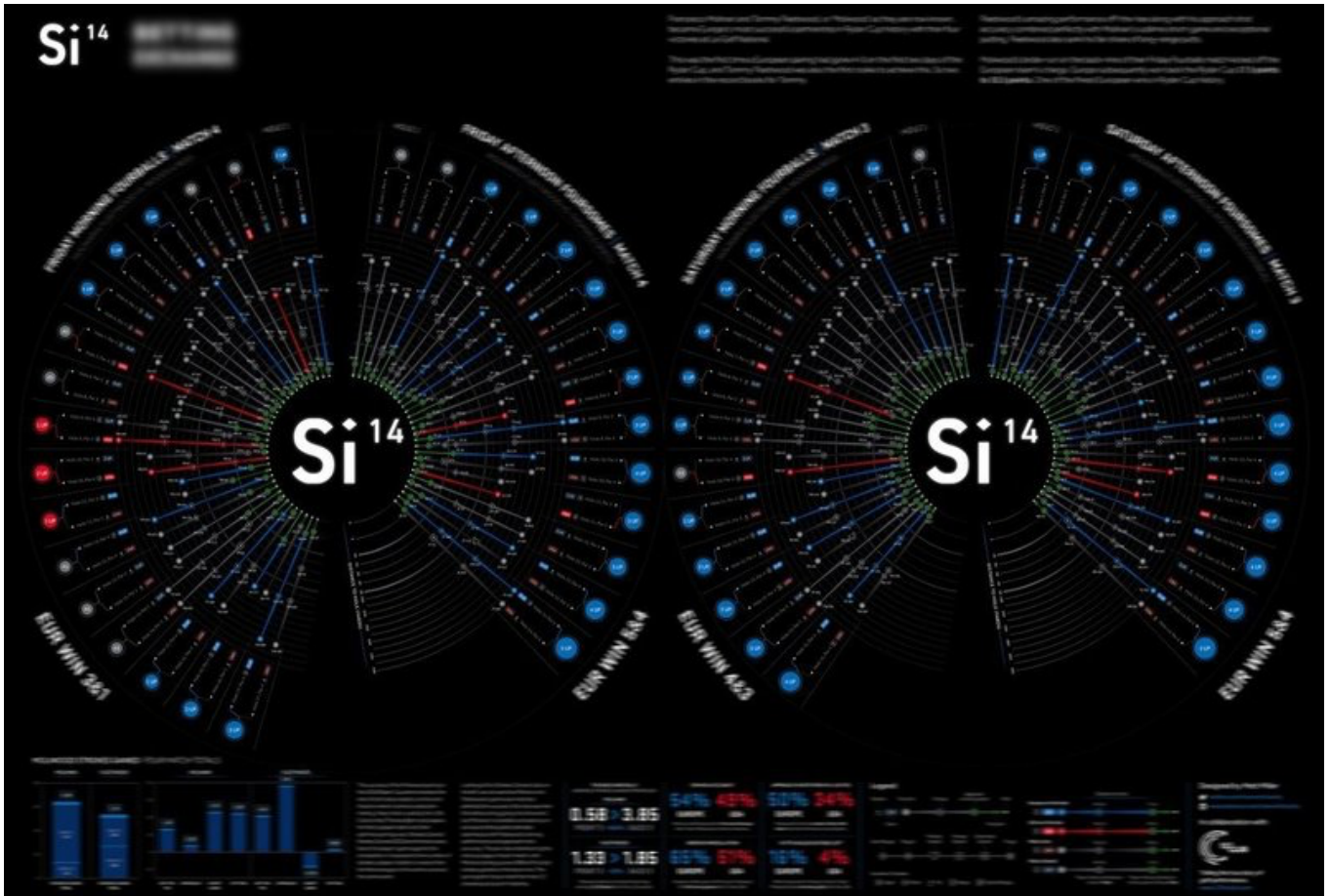
NEUROFUNDS, ARTIFICIAL INTELLIGENCE, BETTING, SCOUTING. AN ANALYST TELLS US WHAT COSMOS SOCCER STATISTICS HAVE BECOME



- What is the difference between ordinary and interpreted statistics?
- How much do statistical companies cost?
- Who writes the codes and algorithms to process the data?
- How many minutes it takes to find the right player on the club's request
- Was CSKA Gaich a good fit?
- What percentage of commission do bookmakers and exchanges take?
- Could Artificial Intelligence Predict the Defeat of Spartak against Ufa?

Victor Kopylov, the founder of Si14, studied economics, management, neurolinguistic programming, and psychology in Novosibirsk. He worked in banking and brokerage structures, got an education in New York in hedge-fund management. After his return to Russia, he founded a company, naming it after the chemical element silicon. He specializes in inefficient markets that require the implementation of robotic trading systems.

In mid-April, Si14 was awarded a special prize by Bookmakers Rating as the analytics project of the year. Triputeni flew in to receive the award from Montenegro, where he lives permanently and was delayed in Moscow due to problems with air travel. This allowed us to ask him about the degree of consumer orientation that can be achieved by the usual numbers that have long flooded soccer life.



- Several years ago we decided to study the market for the best analytics for a professional soccer club," explains Triputen. - None of the existing solutions were satisfactory. The fact is that evaluating players and teams, collecting and interpreting statistical data from commercial companies is focused on the mass client, their solutions are universal for all clubs. It's like the average temperature in the hospital. However, clubs have their own face, tactical scheme, philosophy, which will not fit every player in the computer program, even with good characteristics.

Moreover, not only clubs differ, but also championships. It is incorrect to compare Lewandowski and Zabolotny just because they are both center-forwards. Different specifics of tournaments, different levels of partners, opponents, and opposition. The context in which the data is interpreted is as important as possible, but it was seldom taken into account.

- Before you?

- Generally speaking, yes. I have known Viktor Kopylov for many years, his company was engaged in the robotization of stock exchange trading, and then the creation of sports betting exchanges. The principle of the robots' work is just related to the interpretation of

context, artificial intelligence, and big data. Thousands of details must be taken into account, but the reliability of the result is high. This is exactly what we were looking for.

- Let's take a break from big data. What is it, why, and how?

- Statistical companies like Wyscout, Opta, or InStat break down any match into actions, details, and characteristics. Sitting, say, 22 people somewhere in Moldova or Nigeria, each is responsible for a different parameter or player. Something is counted manually, something is calculated by the computer - fitness data, mileage, etc. The output is a volume of match data, big data. This is what is used for further processing by our algorithms.

- Do you buy it?

- Yes.

- Expensive?

- We pay each statistical company we work with about 60-70 thousand euros a year. Their analysts, by the way, once they are good at their job, often find work at the clubs and other soccer organizations. We also have guys who have passed Wyscout and InStat.

- How do you receive your data?

- As an array of information, in API format. But we interpret it ourselves. Analysts give tasks to the computer, and it runs the statistics through its mathematical models.

- What is the essence of them?

- There is a euro fund, in which there are four artificial bits of intelligence. The computer follows a given algorithm and produces a solution. Let's say we need to compare players. It does not involve the sheer number of actions on the field, but a mass of influencing factors. A back pass, for example, will be treated by any statistic as a back pass. We make a distinction between positive and negative activity, as back passes can be exacerbating if they lead to the development of an attack. Sometimes such passes are the right or even the only solution, sometimes they are not. Our model distinguishes between the two. Perhaps we have not yet reached the ideal, but we are on our way to it.

- Do consumers of your product have to take its quality for granted?

- We tested the system without reference to teams and names. We wanted to know if the result would coincide with the real picture. It did. We found some new guys who turned out to be great players. Before the use of our algorithm, their usefulness was not evident.

- What does artificial intelligence have to do with it and how does it help with soccer

statistics?

- AI is the technology for creating programs and machines that can generate new information based on existing information. Whether we like it or not, AI is increasingly entering our lives. Already today it hires, extends credit, composes songs, and writes novels. In sports, AI has long been no novice. I remember how strongly I was impressed by the confrontation between Garry Kasparov and the Deep Blue chess machine. Even then, in 1997, the game was played on equal terms. After that, technology surged upwards, so that since 2005 no man has beaten a better computer algorithm.

Another important story happened five years ago. Google developed a program that beat the world champion from Korea, Lee Sedol, four times out of five in the ancient game of go. It is impossible to calculate all the moves there, the logic is not based on mathematical probability, but tactics and intuition. It proved that the computer is capable not only of going through the options but also of almost thinking, learning in real-time. His only victory, by the way, the champion attributed to a computer glitch and, after experiencing a shock, ended his career at the age of 36

- How did you apply all this to your needs?

- Having a lot of experience with AI, all we had to do was provide it with good data and formulate the tasks correctly. It is important to note: the AI not only evaluates events that have already happened - a match or a player's actions. It can calculate the ideal development of events and compare the first with the second. This allowed us to do the most important thing - to mathematically describe the effectiveness of a player.

The same model applies to clubs and championships. We can statistically describe any of them, as well as predict, with a high degree of probability, based on historical data, what a particular Spanish championship will look like in 5-10 years, and what the requirements for the players in it will be.

- How detailed are your calculations?

- As detailed as possible. We have a full array of information on all major soccer markets, including the minor leagues. We analyze up to 300 metrics on each player and up to 5,000 on the team, ranging from traditional to our own unique. We are not guided by someone else's opinion or the cost of players on the transfer market. We do not care about anthropometric data, we do not have it in the algorithm. The only reference point is a player's qualities, his performance. And in addition to the profile, there are age, working leg, weight, height, nationality, etc.

I would like to separately mention a unique metric non-shot xG, which allows you to assess the impact of the player's actions on the game situation. To what extent his passing or steering, so to speak, brought the team closer or farther from the goal. Each of the

elements is ranked according to many characteristics: the length of passes, accuracy, direction, "impact" (evaluation of the number of opponents who left a pass behind the ball line), etc. In parallel, the characteristics of the upcoming opponent and the level of expected opposition are calculated and added to the rest.

In essence, our software is a ready-made scouting platform. We can not just tell if a player is good or bad, but explain what exactly his weaknesses and strengths are for the conditions in which he will play, taking into account the specifics of tournaments in which he has already played.

- Which of the world championships are close to the Russian one according to your scoring?

- We recommend the clubs we work with to pay attention to the Czech Republic, Sweden, Argentina where the intensity of the game and the number of fights is similar to our league. And the players from strong, it would seem, the championship of Portugal in Russia will be worse adapted. Also, we pay attention to the compliance of the former tactical requirements to the upcoming ones. When last summer they were evaluating the possibility of Gaich's move to CSKA, there were big doubts about his quick help to the club. The Argentine did not fit Viktor Gancharenko's tactical requirements, because he had completely different tasks at San Lorenzo.

- For example?

- CSKA had the highest defense at the time of Gaich's transfer, except that Rostov practiced the same. The coach demanded that the Army players play defense vigorously at the beginning of the opponent's attacking moves, something Gajic seldom did at San Lorenzo. There were different requirements in terms of positional attacking, etc.

- Do you work with a lot of clubs?

- We started not so long ago, but we already had experience working with the clubs of Switzerland, England. In Russia, we work with one club and one academy. Originally we planned it that way because of the exclusivity principle: one country, one club.

- Is CSKA a Russian club?

- Rubin. Leonid Slutsky is very advanced in the subject, it is interesting and useful to cooperate with him. Other clubs, even the top ones, are not always ready to accept. Last year we helped one RPL team. We sent them recommendations, but we understood that they were not read. They just saw it from the games. We asked for clarification. We heard, "Why do we need it if we're already winning?" That was a killer argument, so everyone went their separate ways. You can't make any serious money on the clubs anyway. The

English giants have analytical budgets of 3-4 million pounds a season, like Liverpool, and you can work with them. Ours are willing to pay 10-15 thousand euros, which does not repay the cost of buying data.

- So the clubs are not a priority for you?

- We do not have a business strategy for working with clubs. This is more my activity and initiative, something like a hobby, which I do not want to give up. Good quality work with a club requires a lot of expenses: human resources, logistics, constant contact. If we lead a club, we have to be inside the situation, fully immersed in the process and the context. In training, matches, everyday life - in everything. That's how it works in England. But if it doesn't bring in revenue, what's the point?

- However, you are willing to look for players at the request of clubs.

- Scouting is an easier story, and we do it. You just need clear terms of reference: anthropometry, playing qualities, price, position, age, prospects. We load the requirements, take into account the characteristics of championships and clubs that the candidates played for, compare the usefulness in different tactical schemes, susceptibility to injury, and a lot of other details, overlay the characteristics of the club that sent the request. The computer search takes a few minutes. Recently a Russian club approached us with a request. We did it. In the database that we are working with, there are 200 thousand players. The shortlist that we recommended was made up of four players.

Originally we were guided by a young analytics company called StatsBomb and the principle of so-called deep statistics. They have good marketing, but, unlike us, there is no customization and no customer connection. They give the software to the club and you can do whatever you want with it. Without professional interpretation, digital data is not always understandable. We give such an interpretation.

- Who deals with the software for the project?

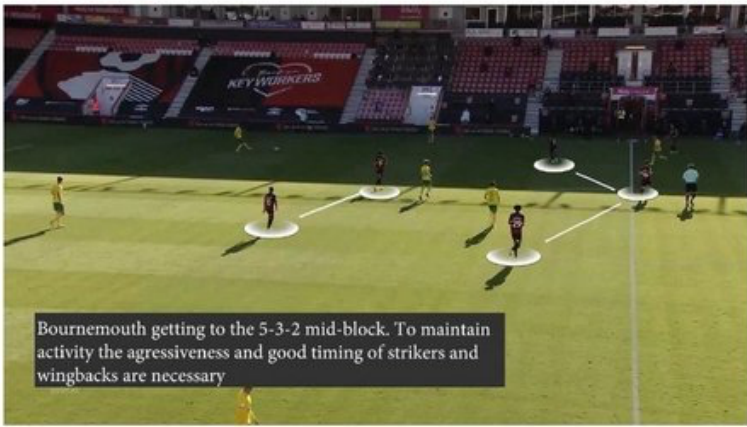
- There are a lot of people in the company, I don't know how many. There are six people in my analytical department. There are two artificial intelligence specialists, young guys, 22-24 years old. They write code, have specialized education, have done this before, and know a lot about it.

- The main business area, as far as I understand, is betting?

- Yes, we have created the betting exchange and we not only calculate the lines with our algorithms but are also ready to offer the bettors help in estimating the odds. This is the main difference between the exchange and a bookmaker's office. It is not profitable for the latter to arm its clients with mathematical tools, because it plays against them. At the

exchange, the bettors compete with each other, we don't care which one of them will win. And our commission is much lower - one percent versus seven or eight at the offices.

Middle third



Bournemouth getting to the 5-3-2 mid-block. To maintain activity the aggressiveness and good timing of strikers and wingbacks are necessary

Bournemouth is getting to the 5-3-2 mid-block that needs wing-backs and strikers step-outs to maintain activity.

Corners


Metric	For	Against
Corners per game	5.11	6.97
Whisker corner	0.42	0.28
all per corner	0.021	0.029
Total CI	0.04	0.02
Total goals	7	4

Player	For	Against
Scotty Rout	1/4	15/100
Yannick Bisse	0	8/80
Scotty Rout	4	0/0
Denise Barnes	4	0/0
Jeffrey Lane	3	0/0
Scotty Rout	2	0/0
Sam King	2	1/0
James King	2	1/0
Calum Hood	2	1/0
Wendie Renard	2	1/0
Chris Maitland	1	1/0
Jack Thomas	1	1/0

Analyzing the last season we are also noting Bournemouth's quality in the set pieces. There were creating a lot of chances because of good crossing technique and timing.

(50% of corners), but the main address of the long passes was Alex who were still. Specially that means that address of players that are dominant on the all the team could improve their overall performance and result.

Build-up



Just 65% of AFC Bournemouth build-up starts with the long pass. Surely we are looking about really small areas but this trend shows us that the team wants to dominate the possession and play short. This table illustrates the amount and success rate of passes from the zone 1 to zones 2 and 4 (zone 5).

- Why don't you raise the commission?

- Bookmakers buy lines and odds from betting companies, put their margins and make a profit. Si14 is not a betting company - we do not earn on the interest but the volume of deals. It is ensured just by the low interest. Another reason why the exchange is interesting to participants is that it does not close the market during events. Whatever happens, all decisions are made by the players. This confirms that we don't have the task of beating customers, we just provide a platform where people can bet against each other. We will only be happy if our analytics help someone "get pumped" and make the right decision.

- If this goes on, mathematical and financial knowledge will become more important to bettors than sportsmanship.

- In many ways it already is. Risk management is a separate area of knowledge whose laws those involved in the industry need to know and abide by.

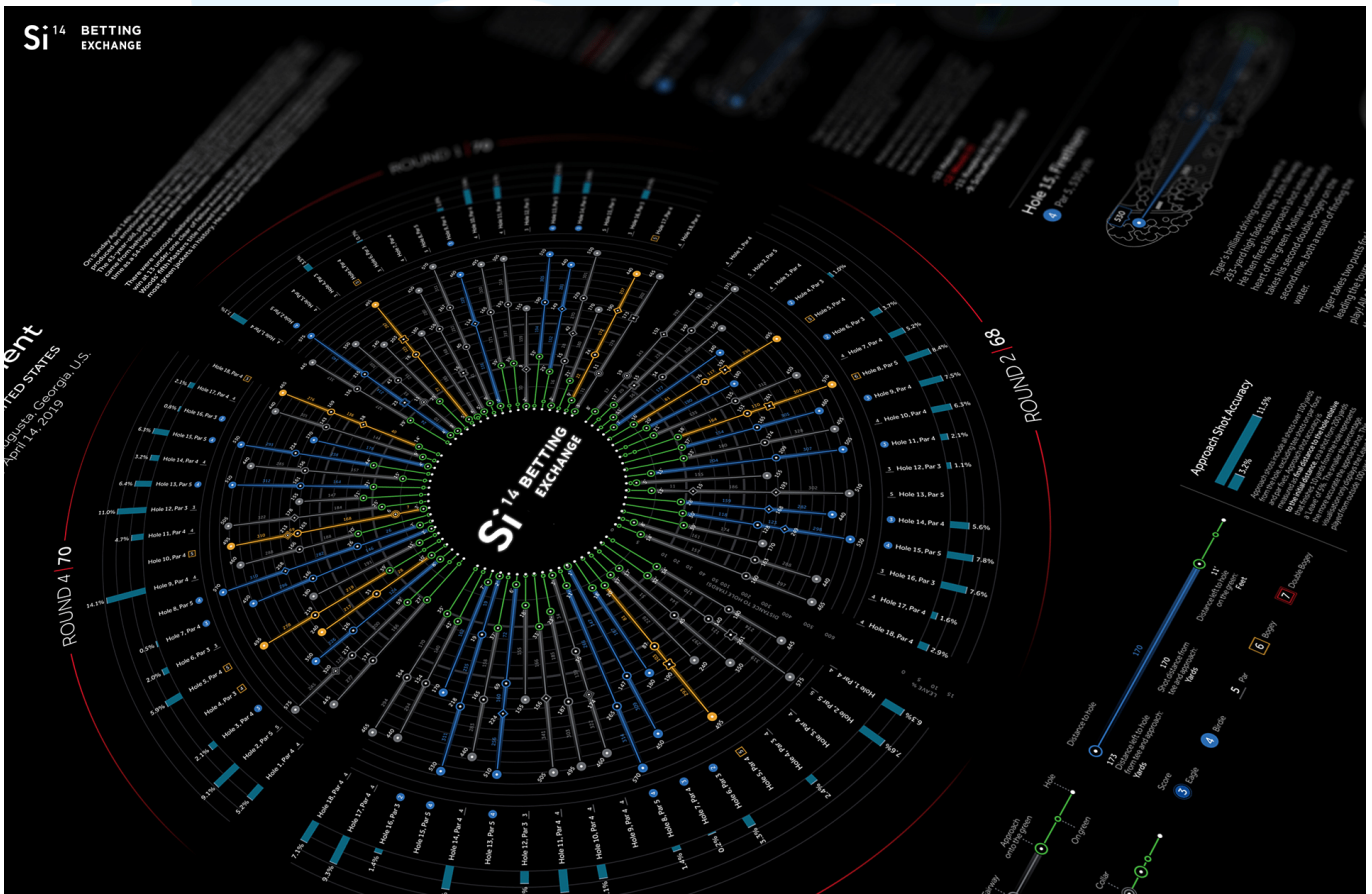
- How much will your analytical tips cost?

- So far we are working in beta mode, final rates will be approved in the summer. A package of tips will cost, roughly, 30 euros. If someone is interested in a hodgepodge, you can get the data in metrics for 10-15 cents apiece. Which foot a player scored more, how many outs per match Millwall performs, what is the probability of a third penalty in Tambov games... Check the boxes - get the price list.

- Could your artificial intelligence predict Spartak's 0-3 loss to Ufa?

- You can't predict if a person ate something stale and then had diarrhea. We evaluate qualities, not suddenness, trends, not an open hatch at night. No one can predict 0:3 from Ufa. But we have an algorithm that describes the team's performance curve after a change of coach. We are ready to give it to our clients in an easy-to-understand form. As well as statistics, how often our recommendations come true in practice. We are not going to hide anything, we have already conducted a test on a focus group, the model works, the results are good. But no one will decide for the players.

In general, the number of factors affecting the result is enormous. In addition to the obvious ones, this is the difference in playing models, and an early goal with a penalty, for example, not always leading to defeat. There are clubs that, left in the minority or conceding a quick ball, statistically do not worsen their performance. Be sure to take these things into account in our calculations.



- Will your exchange will work in Russia?

- Not soon. One famous exchange had to wind up its business in 27 countries because of the pressure from bookmakers and the nuances of the legislation, which is often the same thing. Let's try to occupy the niche where it is free. And where it is, we will try to offer something unique. Suppose the client can create a robot himself, acting according to "if-

then" conditions. If a certain event occurs, the robot will deposit or withdraw money, as an option. It is our development with an intuitive interface.

But wait for a little with Russia. The legislation turbulence is too high here, the rules of the game change often and unpredictably. And the bookmakers' positions are too strong. No sooner had we received an award from the Bookmakers Rating, than we got, let's say, hints: they do not expect us here.

However, we are not looking for a confrontation, on the contrary, we are ready for civilized cooperation. Taking into account the small commission the exchange could be useful for the bookmakers for hedging, that is, for insuring against their risks. They could offer one thing to their clients and bet on the opposite, which would allow them to avoid big losses. We are happy to provide interested market players with such an opportunity.

- What you have in mind requires large investments.

- Victor Kopylov is in charge of the finances. Investors, ideology, the IPO, and the whole economics of the project on it, I am distant due to my duties. But I will say that there are plans to expand the list of sports, deepen the detailing of statistics, and educational cases for users: profile articles, scientific materials, and other immersion in the subject.