



COUNTER-TERRORISTS

0

1:52
Round 3/30

2

TERRORISTS



ANTI-CHEAT TOOL FOR FAIR PLAY IN ESPORT

Case: Counter-Strike: Global Offensive

\$3900	2	0	2
	1	0	1
	0	1	2
\$2550	5	0	2

1	0	2	\$3900
1	2	2	\$4750
2	1	1	\$1400
0	1	2	\$4600
5	1	1	\$4100



Almost Sparker

K	D	U	K/D	ADR	HS%	TT
5	0	2	2.5	167	60%	1

PROBLEM STATEMENT

- 01** Ensuring a fair competition in any kind of sports is crucial.
- 02** Unfairness in sport competition could have a negative consequence on both economic and social.

“Fair Play in Sport provides an invaluable guide to the subject for all those with an interest in ethics and the philosophy of sport”





ESPORT

\$38

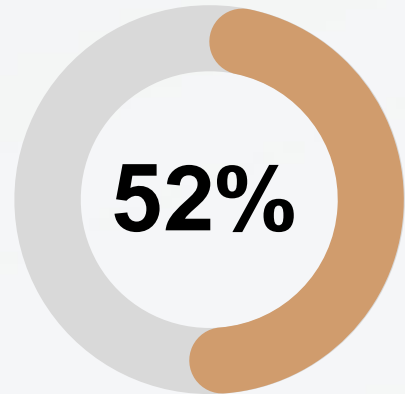
BILLION

will be invested
by Saudi Arabia
in 2030

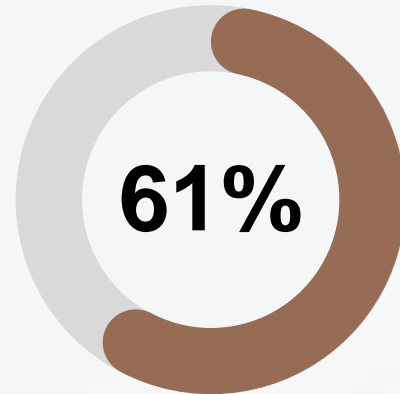
>600

MILLION

audiences

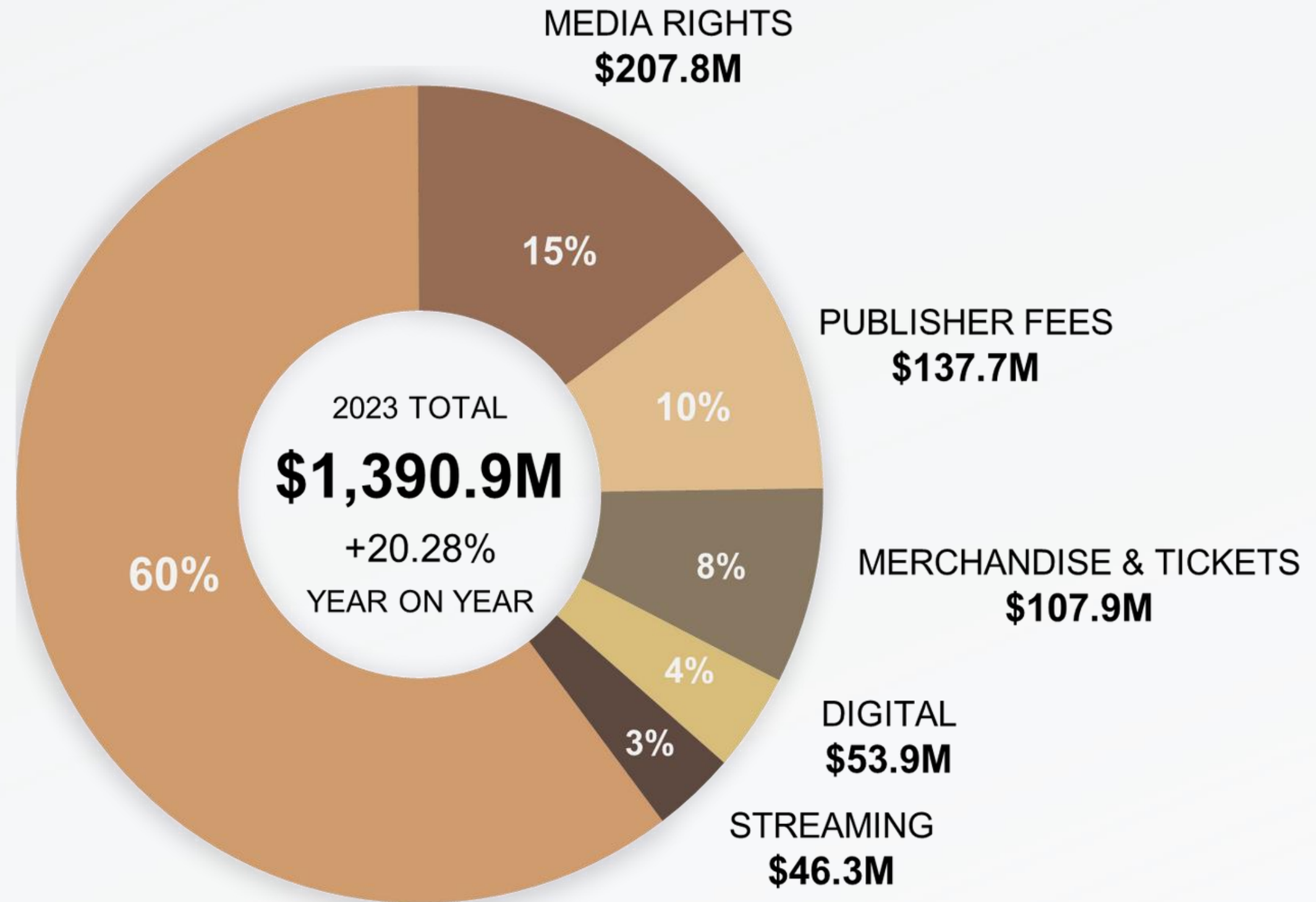


increased eSport
investments by big
brands



growth of online
streaming
platforms

SPONSORSHIP
\$837.3M



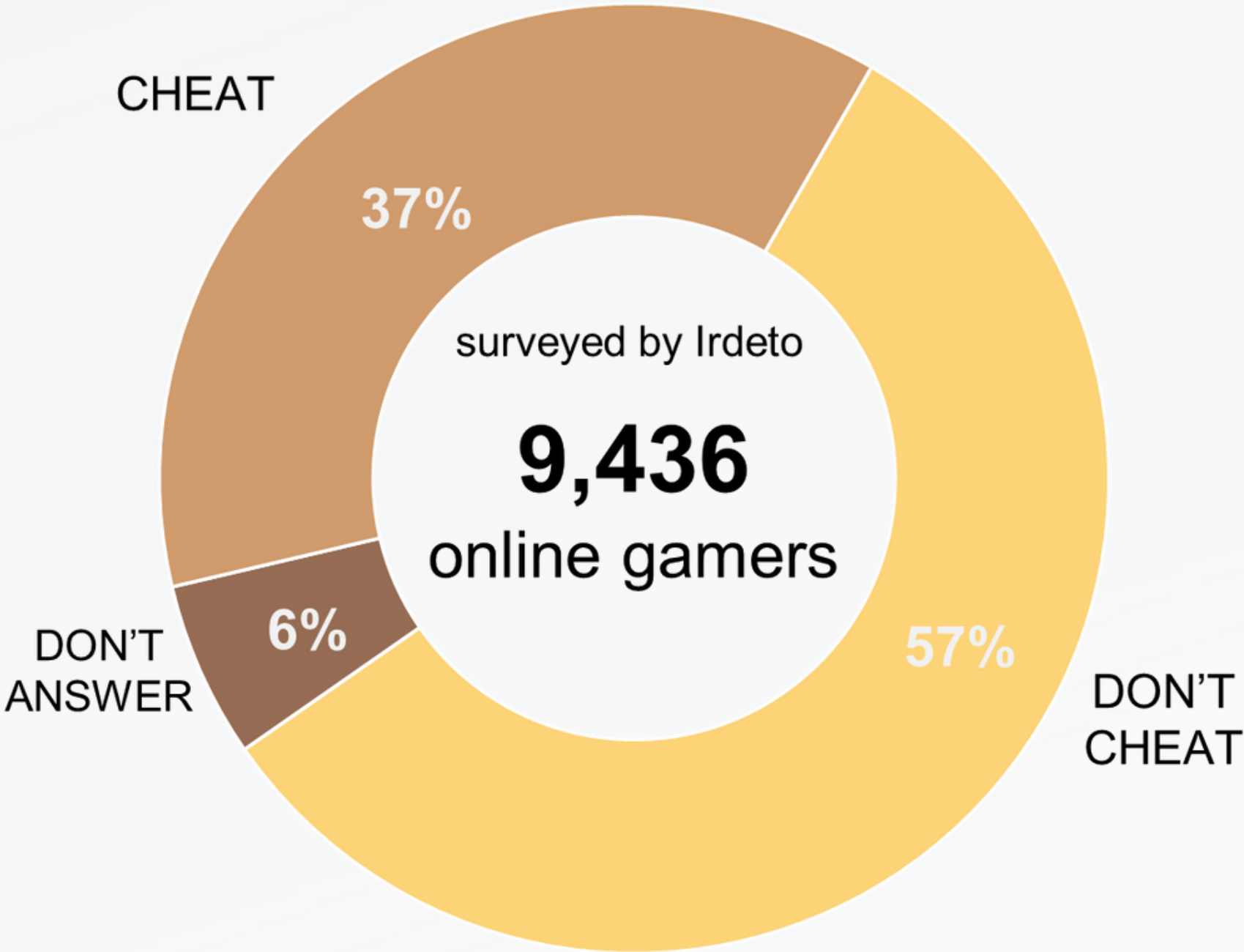
[eSports' potential \(am.pictet\)](https://am.pictet.com)

[The Incredible Growth of eSports \[+ eSports Statistics\] \(influencermarketinghub.com\)](https://influencermarketinghub.com)



STATISTICS

*How often do you use
third-party tools to cheat in
multiplayer games online?*



EXISTING SOLUTIONS

VALVE

Valve

~\$15 MILLION

FACEIT

Faceit

~\$12 MILLION

DENUVO

Denuvo

~\$2 MILLION

EQU8

EQU8

~\$1.6 MILLION

- Detect cheater using their cheat signatures.
- Detect unauthorized use of third-party modifications or programs.

CHEATING IN CS:GO

Cheating software for CS:GO can help you to:

Vision Assistance



Aiming Assistance



External Assistance



1,207,407
















Playing 18 hour ago

1,270,778

24-hour peak

1,802,853

All-time peak

 KOGGGYYYYY 1914  			
Overall	Last 20 Matches		
1049 Matches	55% Win Rate	19 / 47% Avg. Kills / HS	1.04 / 0.71 Avg. K/D / K/R
 EthaNN-- 2105  			
Overall	Last 20 Matches		
365 Matches	75% Win Rate	25 / 48% Avg. Kills / HS	1.26 / 0.88 Avg. K/D / K/R
 KingHaiX 3178  			
Overall	Last 20 Matches		
829 Matches	65% Win Rate	23 / 45% Avg. Kills / HS	1.35 / 0.82 Avg. K/D / K/R
 _Viperr 1341  			
Overall	Last 20 Matches		
146 Matches	60% Win Rate	21 / 27% Avg. Kills / HS	1.58 / 0.8 Avg. K/D / K/R
 j4nnis 2243  			
Overall	Last 20 Matches		
2103 Matches	60% Win Rate	20 / 58% Avg. Kills / HS	0.97 / 0.68 Avg. K/D / K/R

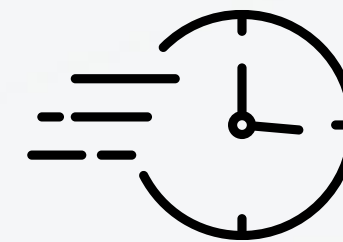
SOLUTION



01

NEW

Analyzes in-game behavior



02

FAST

Takes only 2 minutes

03

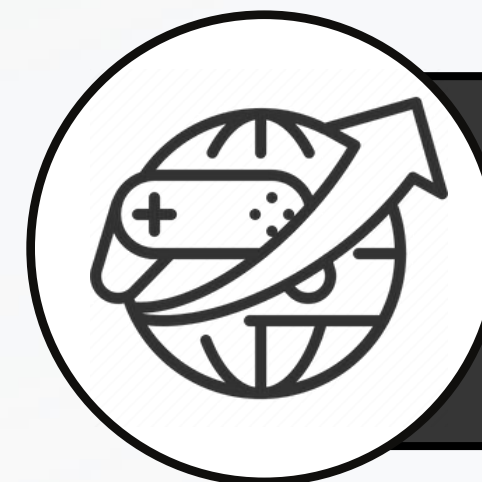
RELIABLE

99% accuracy



PLAYER

\$3/month



ORGANIZER

\$10.000/tournament

PROTOTYPE

Step 2

Save all statistics



Step 4

Detect cheaters



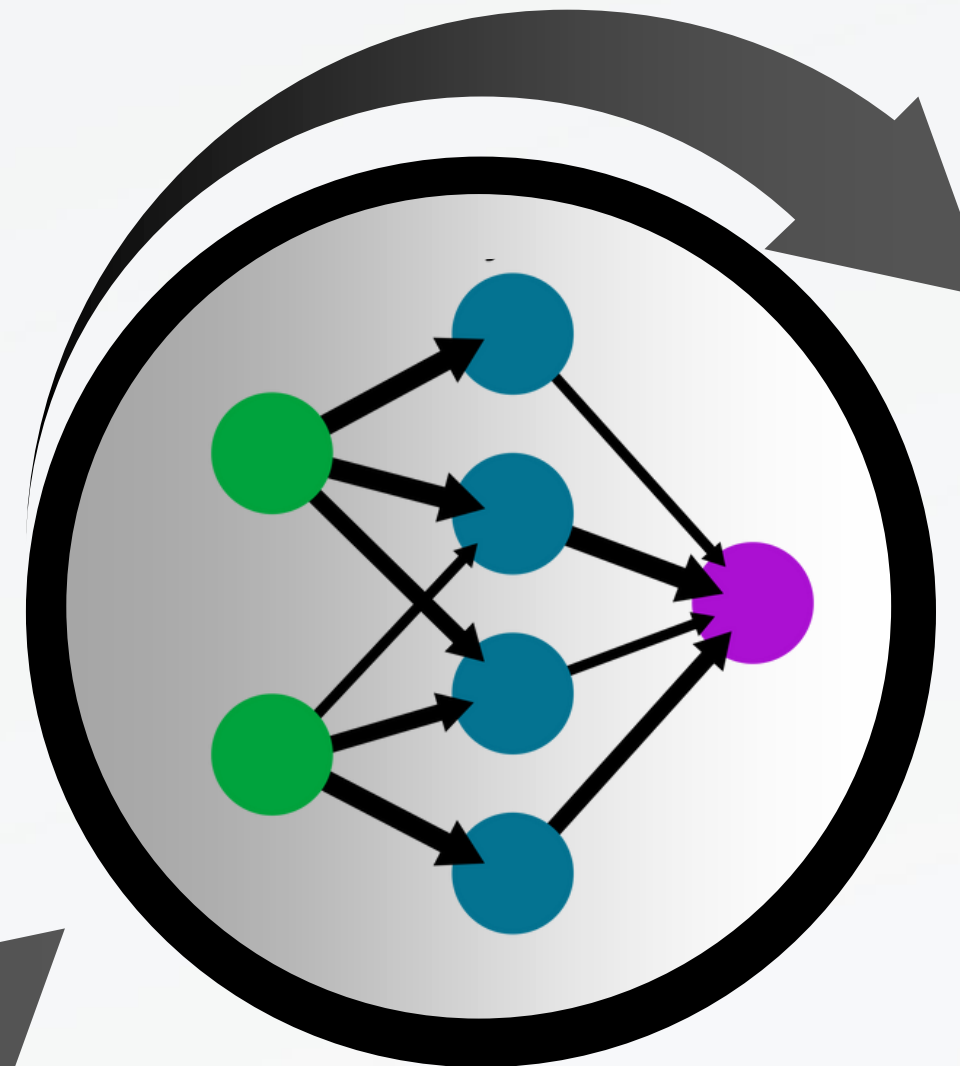
Step 1

Record the gaming process of players



Step 3

Train model



STEP 1



Record, process, and analyze
the in-game behavior and activity
of the player

STEP 2

- Convert demos to csv files
- Save all statistics from the game such as:
 - speed of movements
 - position of crosshair
 - etc.

	У	П	С	СДМ	СЧЕТ
CT	37	2	18	★	83
The Boogeyman	18	6	17	★	50
PodPivan	19	6	17	★	47
NNBosu+	16	2	22	★	37
Skalm3n	11	5	23	★	27
T	31	3	20	★	75
respect0770	21	3	19	★	48
MORG	19	5	21	★	45
Hezlik	16	1	21	★	33
okadel76	9	6	21		26
stoxrizto					

Заслуги 1 по раундам

STEP 3

Tick	Round	PlayerID	PlayerName	KillFlag	DamageFlag	WeaponFireFlag	Weapon	HitGgroup	Velocity	VictimName	VictimID	ViewX	ViewY
11009	1	14	Almost Sparker	1	0	0	USP-S	Chest	226.299926	Яна Мефе	4.0	335.451050	355.847168
11145	1	14	Almost Sparker	1	0	0	USP-S	Head	0.000000	TILT DYNASTY	3.0	312.736816	358.143311
11583	1	14	Almost Sparker	1	0	0	USP-S	Head	62.531777	LittleBitch	9.0	184.954834	356.110840
15557	2	14	Almost Sparker	1	0	0	MP9	Head	73.822578	ExPanda	11.0	86.390991	0.950317
16261	2	14	Almost Sparker	1	0	0	AK-47	Head	14.711361	Яна Мефе	4.0	168.760986	358.890381
19994	3	14	Almost Sparker	1	0	0	MP5-SD	Head	9.718740	ExPanda	11.0	207.031860	0.032959
20946	3	14	Almost Sparker	1	0	0	MP5-SD	Head	16.695480	n0ck j0rc	10.0	205.471802	0.049438

Extract necessary parameters using relevant algorithms

STEP 3

	PlayerName	PlayerID	HS percentage	Avg per kill	N of point
0	Яна Мефе	4	0.357143	0.142857	2
1	fragerinho	8	0.333333	0.111111	1
2	wolft	12	0.388889	0.055556	1
3	TILT DYNASTY	3	0.500000	0.071429	1
4	LittleBitch	9	0.421053	0.105263	2
5	NOFlash	13	0.333333	0.000000	0
6	❤️🌟	7	0.333333	0.000000	0
7	n0ck j0rc	10	0.400000	0.100000	1
8	ExPanda	11	0.478261	0.000000	0
9	Almost Sparker	14	0.729167	0.229167	11

Train models
(LSTM, classical ML, TabNet)
on parameters of
cheaters and clean players

STEP 4

Almost Sparker



100% cheater

LittleBitch



Some suspicious movements

NOFlash

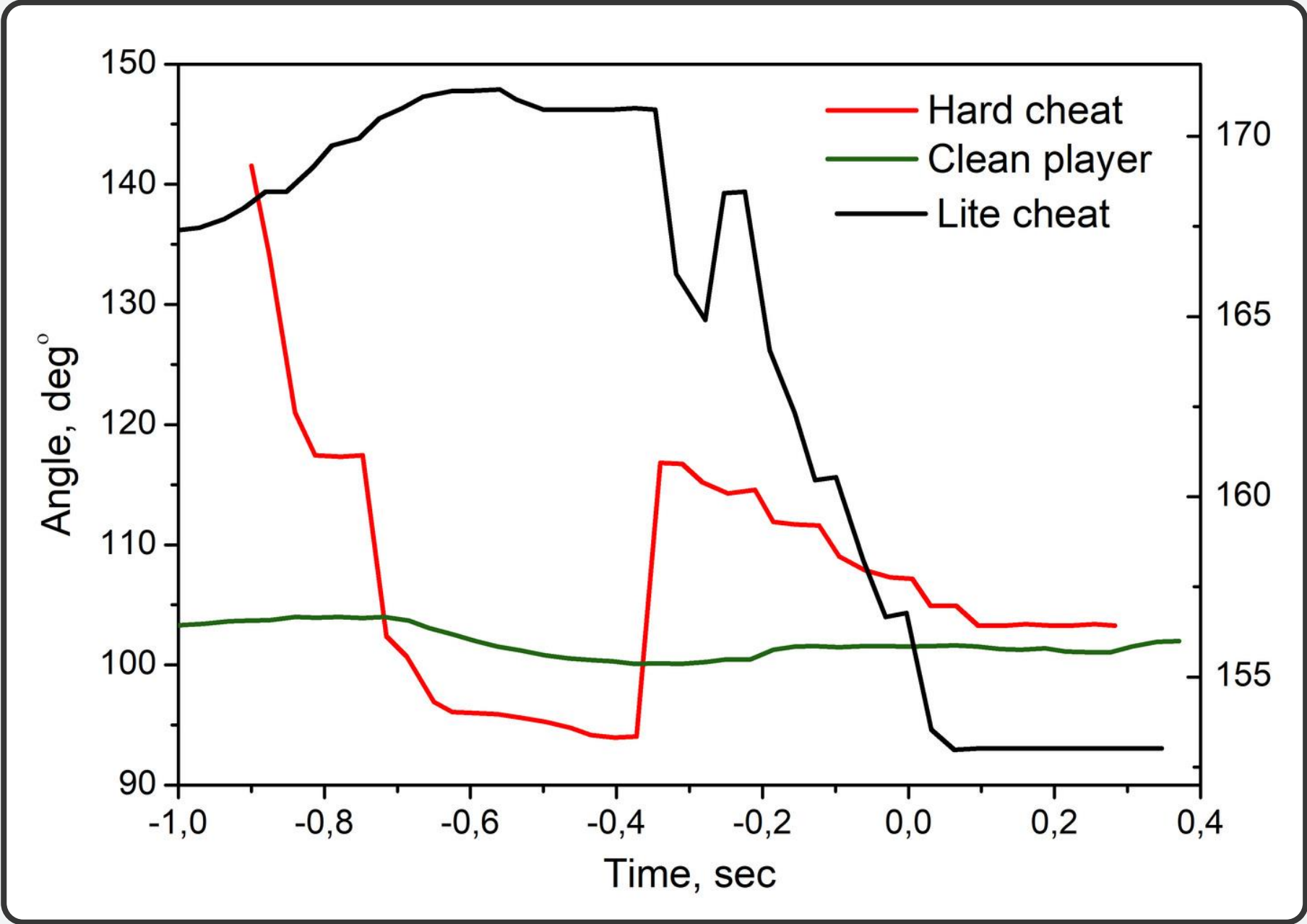


Clean player

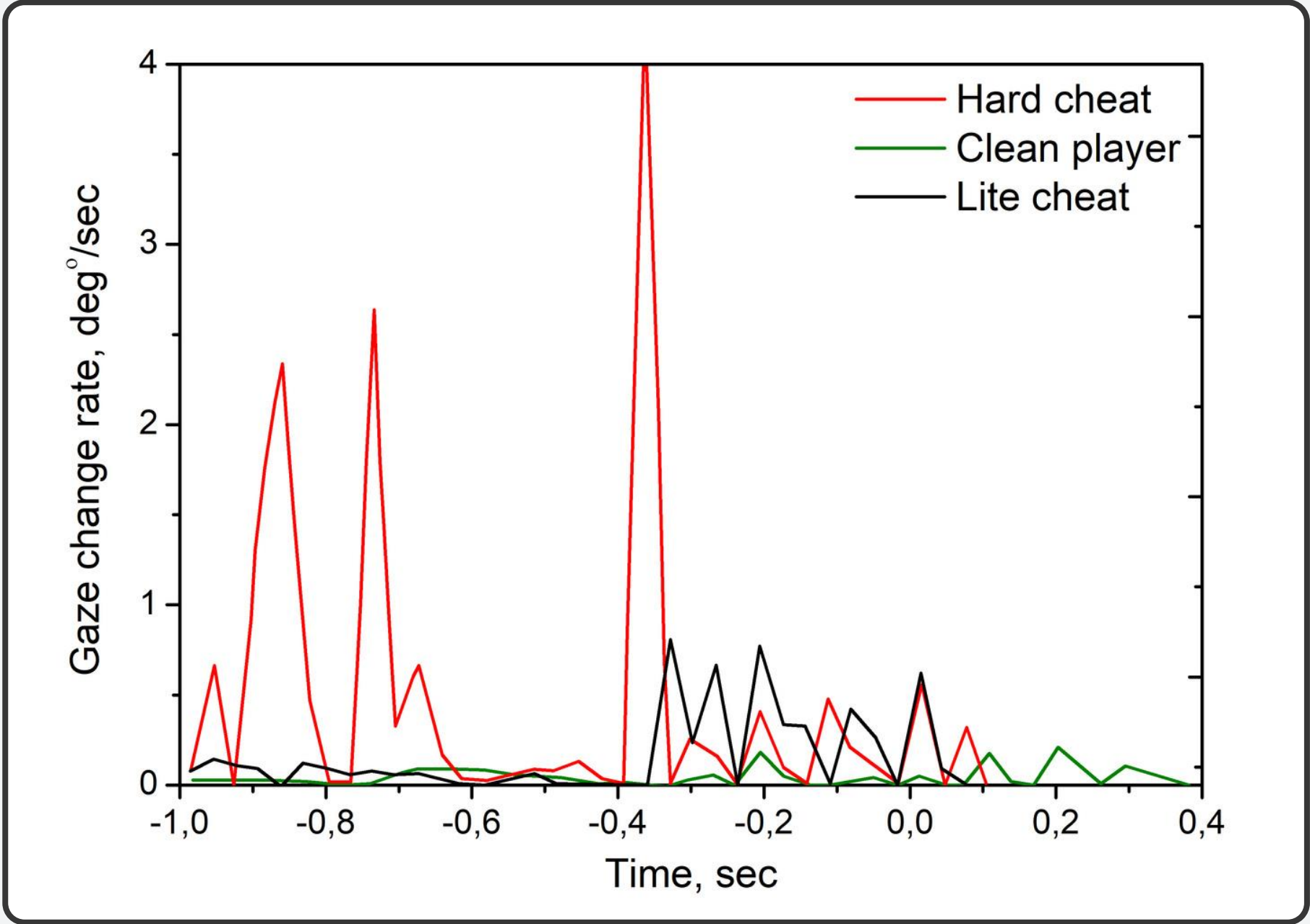
Classify players



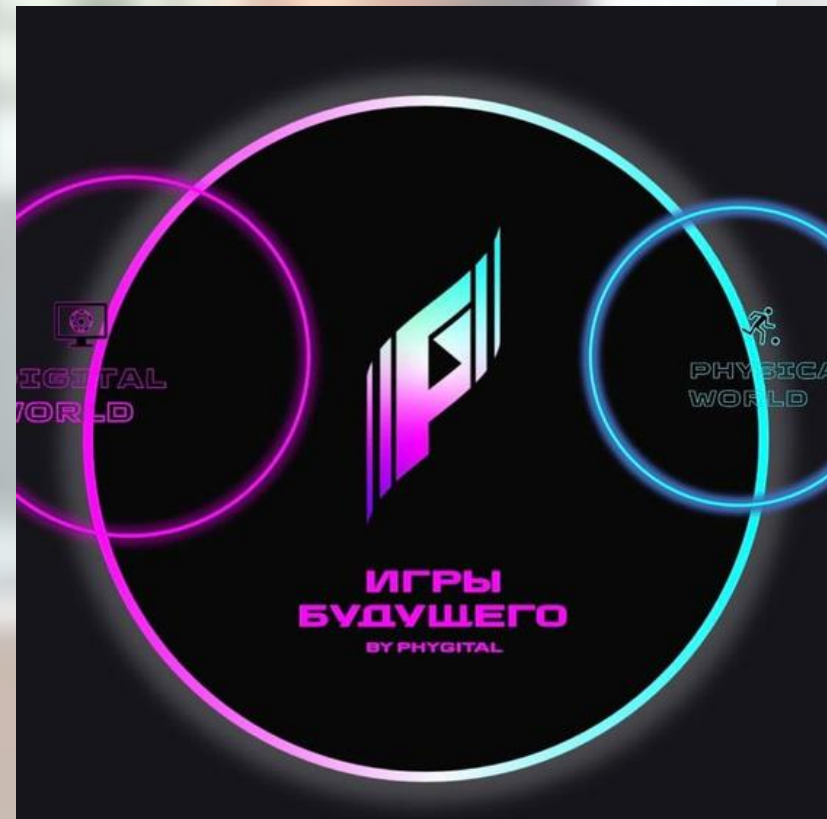
Gaze direction (time)



Gaze velocity (time)



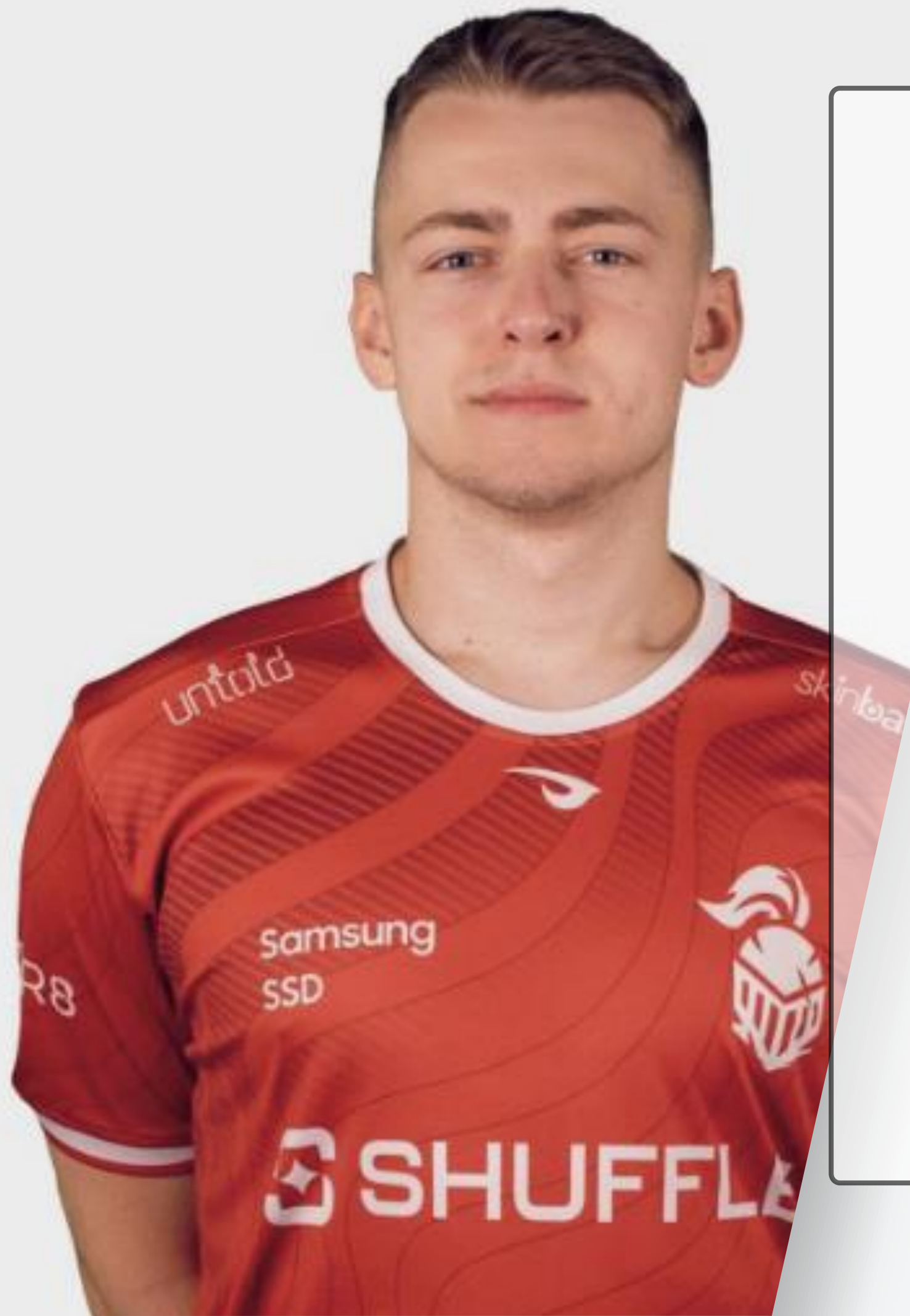
END USER FEED BACK



РОССИЙСКАЯ
КИБЕРСПОРТИВНАЯ
ЛИГА

**Both organizers are willing to test our Anti-Cheat during December
and then make further decisions about partnership**

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AURIMAS 'BYMAS' PIPIRAS

from professional ITB team

- The idea is brilliant, we all need it.
- It is insane that your tool can recognize cheaters with such accuracy.
- I hope your tool will be used in big online tournaments.



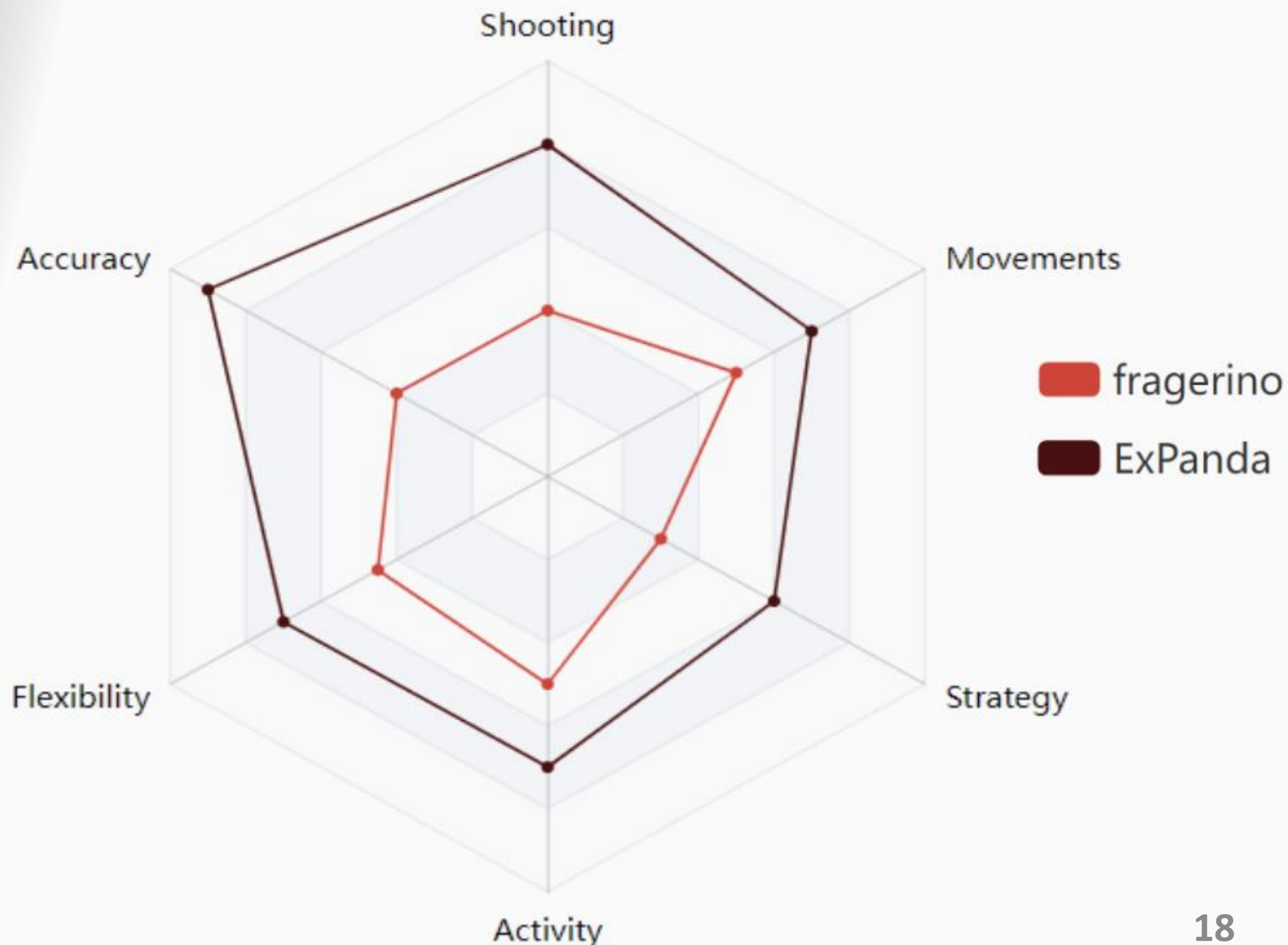


Aleksei 'RuFire' Burakov

Famous CS recruiter in CIS

"With your tool I analyzed 12 players and chose one of them. It took only 30 minutes, instead of 12 hours."

ADDITIONAL BENEFIT



FEEDBACK

Andrey Somov

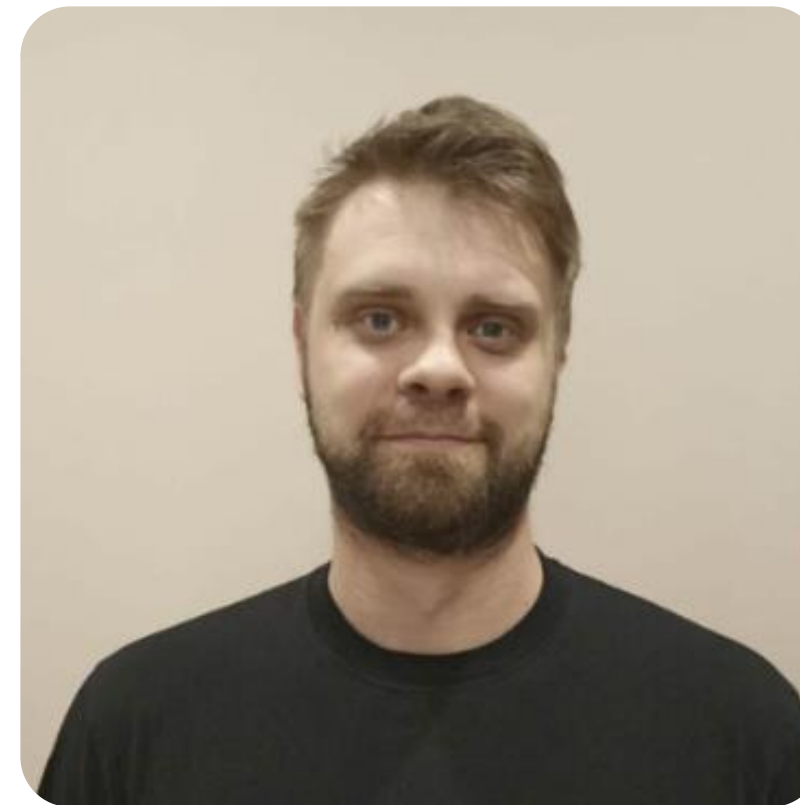
Head of eSport lab in
Skoltech



“Proving that it is possible to analyze in-game behavior using in-game stats from the demo is really great.”

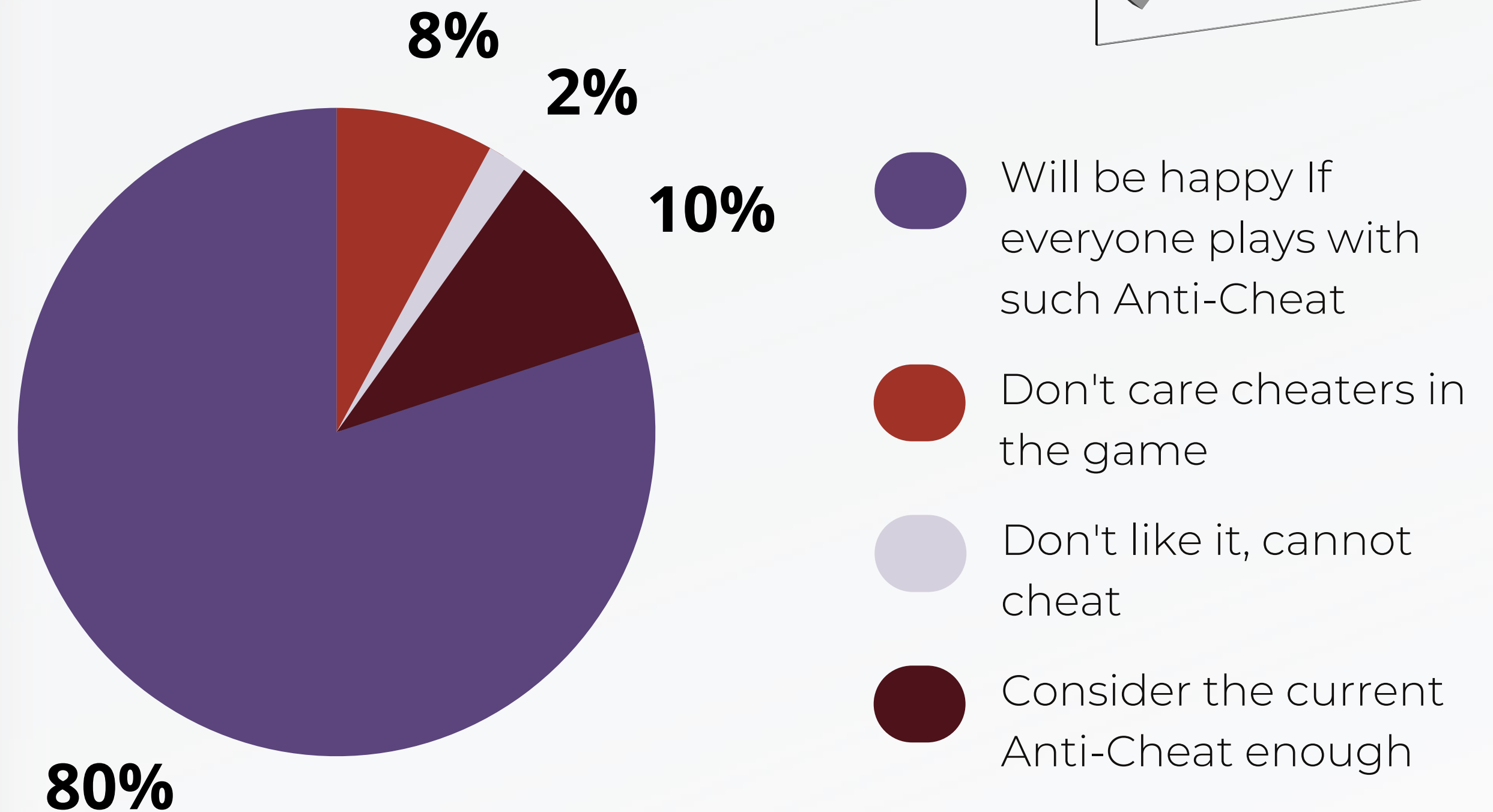
Anton Vinogradov

Head of eSport products
CEO of DreamEaters



“This anti-cheat tool will be a great extension for our Game-R project”

PLAYERS SURVEY



PROJECT EVOLUTION

- Described eSport potential
- Analyzed more parameters
- Trained neural network
- Gathered the feedback on our prototype from professionals
- Made a deep market research
- Described our plans



OUR TEAM

team 6



Ilia Zherebtsov

Engineering systems

Manage the project

Ilia.Zherebtsov@skoltech.ru



SCAN ME



Valeria Abramova

Advance

Manufacturing

Technologies

Contacting clients



Uyen Vo

Data Science

Software engineer



Keyyapat Tiputhai

Energy system

Market research



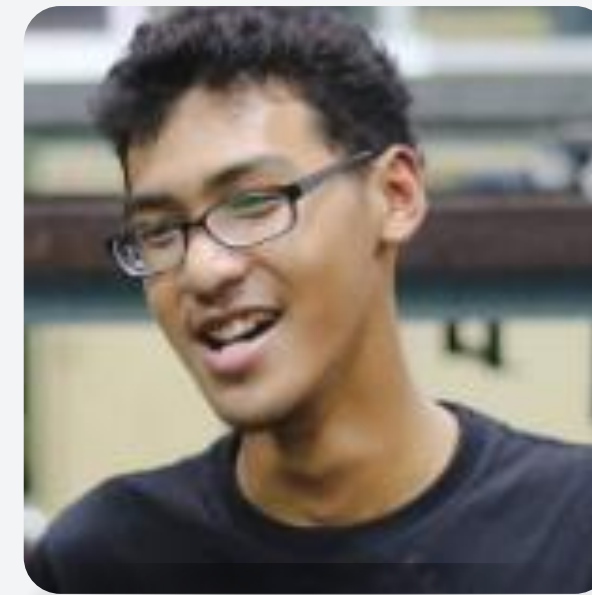
Ivan Borisov

Data Science

Collecting data



**THANK'S FOR
WATCHING**



ROADMAP

- Collecting data
- Improving model
- Validating model
- Pilot usage
- Improve Analytics

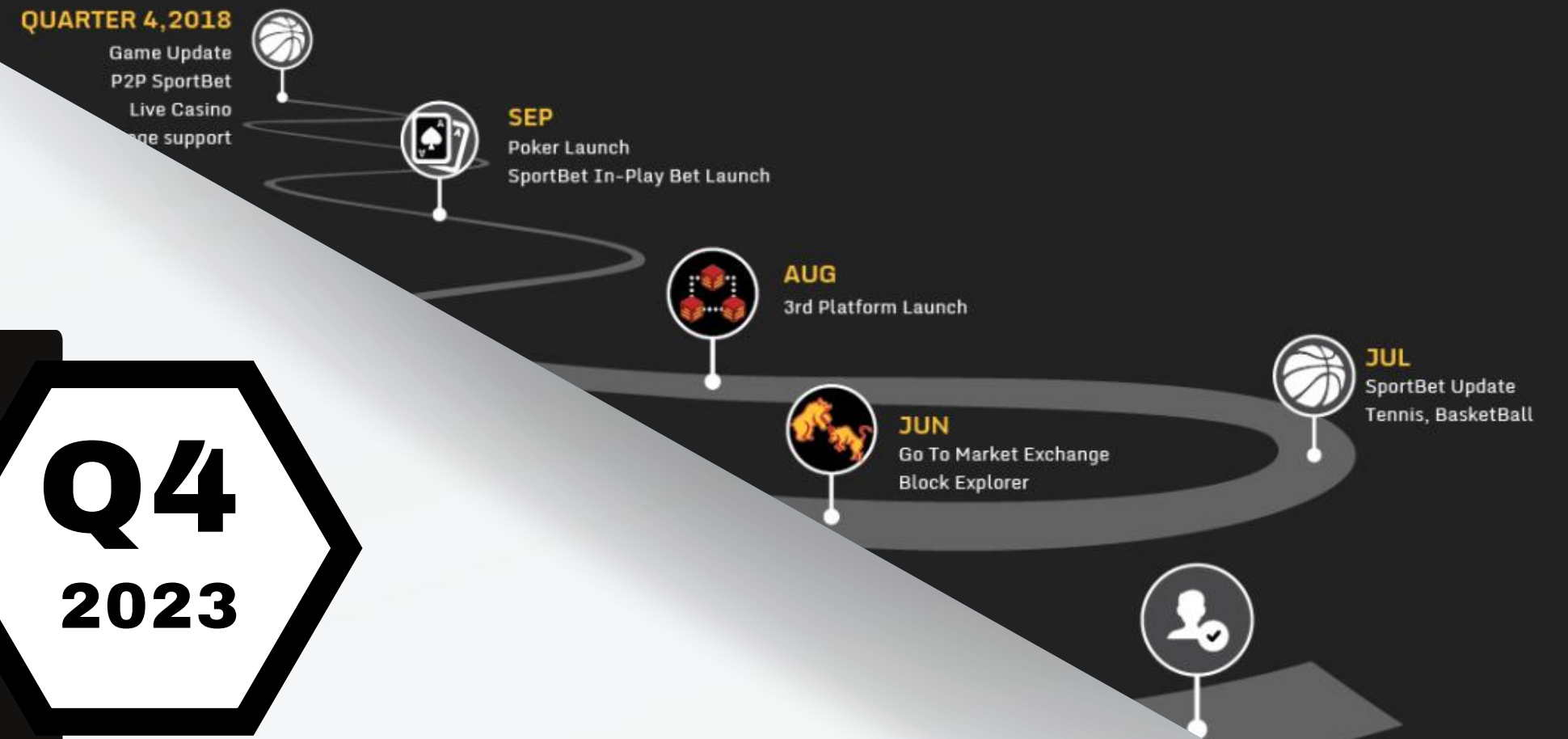
Q4
2023

- Improve Analytics
- Recruiting assistance
- Tournament implementation










Q1
2024

- Tournament implementation
- Establishing new partnerships

Q2
2024



BUSINESS MODEL

Key Partnerships  <ul style="list-style-type: none">• Phygital games• Russian eSport league• GameR	Key Activities  <ul style="list-style-type: none">• Collecting demos• Choosing parameters• Training model• Promontion	Value Propositions  <p><u>Anti-Cheat tool for fair players:</u></p> <ul style="list-style-type: none">• The anti-cheat system uses a behavioral approach to detect cheating• To help companies to organize fair tournaments	Customer Relationships  <ul style="list-style-type: none">• Guarantee of fair game• online/phone support	Customer Segments  <ul style="list-style-type: none">• Organizers of online tournaments• Players who play on separate servers
	Key Resources  <ul style="list-style-type: none">• computers• players• finance		Channels  <ul style="list-style-type: none">• Advertisement• Website• Online/Phone customer service	
Cost Structure  <ul style="list-style-type: none">• Employees• Cost of equipment• Cost of advertisement and website• Cost of data collecting			Revenue Streams  <ul style="list-style-type: none">• Sales of Anti-Cheat• Subscription for players• Third-party adverstising on the site	