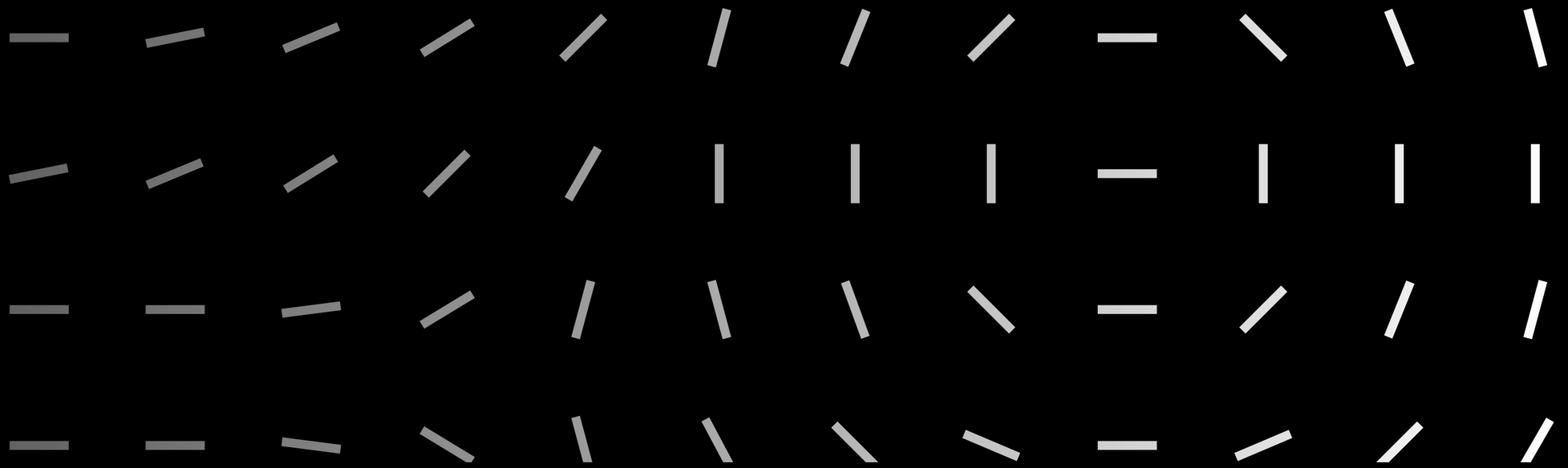


Preparing chess games using Big Data and Artificial Intelligence

Isaac Lozano Osorio

BENIDORM CHESS OPEN

Presentation

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PhD in Artificial Intelligence

isaac.lozano@urjc.es

isaaclozanoosorio

@isaac_lozano_97

@isaaclo97

Founder of YottaChess.

YOTTABASE

Assistant Professor (PhD).
ETSII and the GRAFO Group member.

Universidad Rey Juan Carlos

Escuela Técnica Superior de Ingeniería Informática

grafo RESEARCH

- Ciberseguridad e inteligencia artificial resiliente para la CAM
- CIPHERENGINE (European commision).

Part of the technical team at the 2024 Budapest Olympiad (women's)

- Analysis server
- Player reports
- OSINT (players nicknames)
- On the board database

FEDA

Winner of the 2nd Guardia Civil National Ciber League.
Winner of JNIC 2022, 2024, 2026.
Selected participant in Meta's BountyConEDU.

We will hold a contest featuring three 2-month subscriptions to YottaChess.



https://app.wooclap.com/LSUZBIP

1. How to obtain a large amount of data to prepare for our games.

2. How to use AI for chess.

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Agenda

Data acquisition.

Use of AI in chess.

Your turn.

BENIDORM CHESS OPEN

Agenda

Data acquisition.

Use of AI in chess.

Your turn.

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Nickname detection methodology

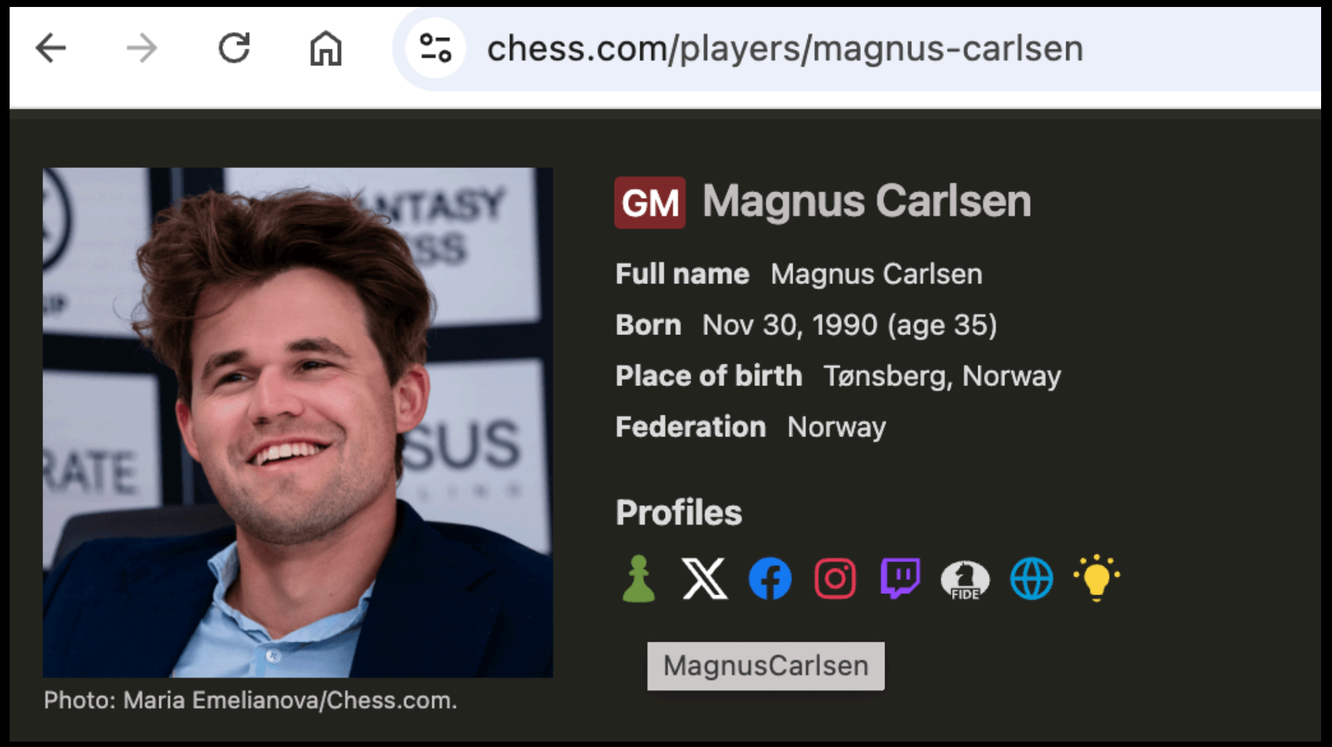
- **Chess.com** / Lichess.org.
- Chess-Results / Info64.
- YottaChess :-)

Last Update: February 27, 2026 at 3:07 AM

All | All countries

Rank	Name	Change	Classical	Rapid	Blitz
#1	GM Magnus Carlsen		2840	2832	2869
#2	GM Hikaru Nakamura		2810	2742	2838
#3	GM Fabiano Caruana		2795	2727	2769

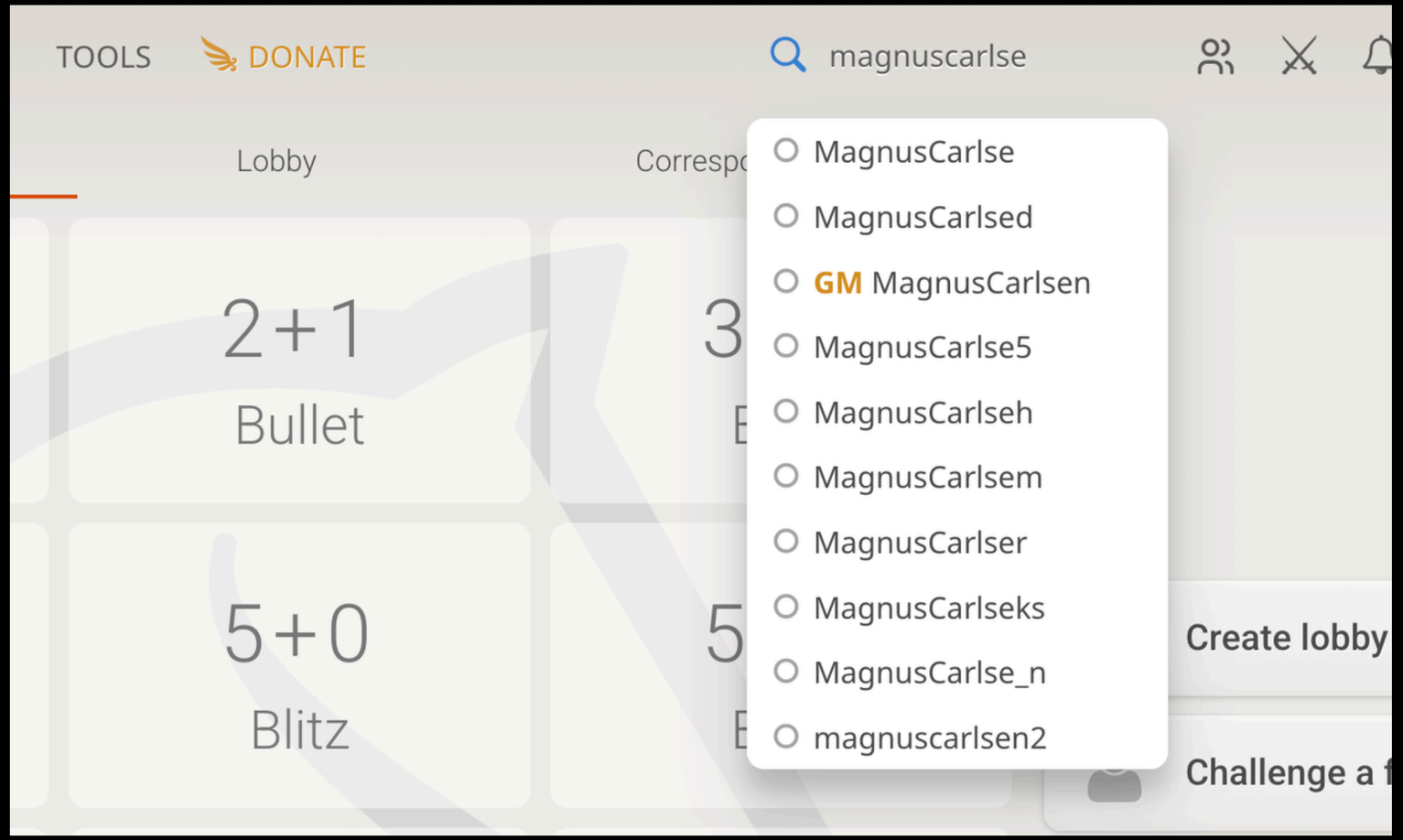
https://www.chess.com/ratings?page=1



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Nickname detection methodology

- Chess.com / **Lichess.org.**
- Chess-Results / Info64.
- YottaChess :-)



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BENIDORM CHESS OPEN

Nickname detection methodology

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- **Chess-Results** / Info64.
- YottaChess :-)

Carlsen, Magnus	0	1503014		NOR	36th European Club Cup 2021	2021/09/24	-	7	277
Carlsen, Magnus	0	1503014		NOR	Meltwater Champions Chess Tour	2021/08/30	2	15	16
Carlsen, Magnus	0	1503014		NOR	Meltwater Champions Chess Tour	2021/08/30	2	15	16
Carlsen, Magnus	0	1503014		NOR	Meltwater Champions Chess Tour	2021/07/04	4	15	16
Carlsen, Magnus	0	0		MEX	Dominguero de junio	2021/06/27	27	5	27
Carlsen, Magnus	0	1503014		NOR	Meltwater Champions Chess Tour	2021/05/25	6	15	16
Carlsen, Magnus	0	1503014		NOR	Meltwater Champions Chess Tour	2021/05/25	6	15	16
Carlsen, Magnus	0	1503014		NOR	MCCT New In Chess ClassicPreli	2021/04/26	1	15	16
Carlsen, Magnus	0	1503014		NOR	Meltwater Champions Chess Tour	2021/03/15	1	15	16
Carlsen, Magnus	0	1503014	MAGNUSCARLSEN	NOR	2021 World Corporate Champions	2021/02/20	-	6	200
Carlsen, Magnus	0	1503014		NOR	Champions Chess TourOpera Euro	2021/02/08	1	15	16
Carlsen, Magnus	0	1503014		NOR	Champions Chess Tour - Airthin	2020/12/28	1	11	12
Carlsen, Magnus	0	1503014		NOR	Torneo examen 2020 WTC	2020/12/24	3	7	20
Carlsen, Magnus	0	1503014		NOR	Torneo Evaluacion del Tercer N	2020/12/16	-	7	110
Carlsen, Magnus	0	1503014		NOR	Champions Chess TourSkilling O	2020/11/24	1	15	16
Carlsen, Magnus	0	1503014		NOR	Champions Chess TourSkilling O	2020/11/24	1	15	16

Eizaguerri Floris, Maria	0	32065752	mariiia04	ESP	Torneo Blitz Online Día de la
Eizaguerri Floris, Maria	0	32065752	Aragon	ESP	Cerrado IM 16 febrero -code
Eizaguerri Floris, Maria	0	32065752	mariiia04	ESP	Torneo Blitz Online Gambito
Eizaguerri Floris, Maria	27758	32065752	C.A. iberCaja	ESP	VII Sunway Sitges Internation
Eizaguerri Floris, Maria	0	32065752		ESP	VII Sunway Sitges Internation
Eizaguerri Floris, Maria	0	32065752	pianochess13	ESP	2020 FIDE Online OlympiadT
Eizaguerri Floris, Maria	0	32065752	pianochess13	ESP	2020 FIDE Online OlympiadD
Eizaguerri Floris, Maria	3968	32065752	Jaime Casas		ARA Cto de Aragon por Equi
Eizaguerri Floris, Maria	3968	32065752	Club de ajedrez Jaime Casas 2		Cto de Aragon por Equipos F
Eizaguerri Floris, Maria	3968	32065752	Club de ajedrez Jaime Casas 1		ARA Cto de Aragon por Equi
Eizaguerri Floris, Maria	140674	32065752		ESP	International Chess Open Gra

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Nickname detection methodology

- Chess.com / Lichess.org.
- Chess-Results / **Info64.**
- YottaChess :-)

Ran.	Tít.	Nombre	Fed.	FIDE	Nac.	F.Nac.	FIDE ID	ID Nac.	Origen/Club	Info
1	GM	Gonzalez Perez, Arian		2481	2466	1988	3507777	26235	GAL	Ariancito
2	GM	Larino Nieto, David		2461	2447	1989	2256444	13144	GAL	Nitratochess
3	IM	Martin Duque, Jesus		2431	2442	1996	2208954	21251	MAD	JesusMartinDuque
4	IM	Tejedor Fuente, Enrique		2426	2430	1995	2299100	16130	CNT	Kiketf
5	IM	Vega Gutierrez, Sabrina		2392	2388	1987	2219026	12353	CAN	Valeron87
6	FM	Quispe Arteaga, Gabriel		2389	2391	2003	32059809	28798	MAD	ClashRoyale
7	FM	Garrido Outon, Alex		2379	2368	2005	24516279	29726	AND	Xess21
8	FM	Remolar Gallen, Jose		2335	2330	1994	2215187	21287	VAL	chess-rankings
9		Jimenez Almeida, Luis David		2285	2283	1996	22242244	23286	NAV	Pingah
10		Diaz Mino, Pablo		2281	2291	2003	24520470	31142	AND	Pablodiaz_03
11	FM	Alonso Garcia, Aaron		2258	2256	2003	24521060	29242	MUR	luron2003
12		Pena Morales, Hugo		2250	2220	1991	3804771	37222	ARA	SilenciaCuotas91
13		Ingunza Curro, Andres		2245	2247	2004	24526371	29467	MAD	easychess18
14	WFM	Eizaguerri Floris, Maria		2244	2256	2004	32065752	27758	ARA	mariiia04
15		Palacios Herrero, Pablo		2243	2248	1995	22262288	24595	ARA	PPalas

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Nickname detection methodology

“Advanced techniques”

Combinación	Ejemplo
`firstname+lastname`	`MagnusCarlsen`
`lastname+firstname`	`CarlsenMagnus`
`firstname+año4`	`Magnus1990`
`lastname+año4`	`Carlsen1990`
`año4+firstname`	`1990Magnus`
`año4+lastname`	`1990Carlsen`
`fl+año4`	`MagnusCarlsen1990`
`firstname+año2`	`Magnus90`
`lastname+año2`	`Carlsen90`

```
...
magnus99090
Magnus99090
magnuscarlsen
magnuscarlsen1990
MagnusCarlsen1990
sungam
sungaM
sungam_0
...
```

- Google Dorks
- **https://github.com/digininja/CeWL**
- **https://github.com/Mebus/cupp**

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Nickname detection methodology

- Chess.com / Lichess.org.
- Chess-Results / Info64.
- YottaChess :-)

How can we detect which nickname belongs to a chess player?

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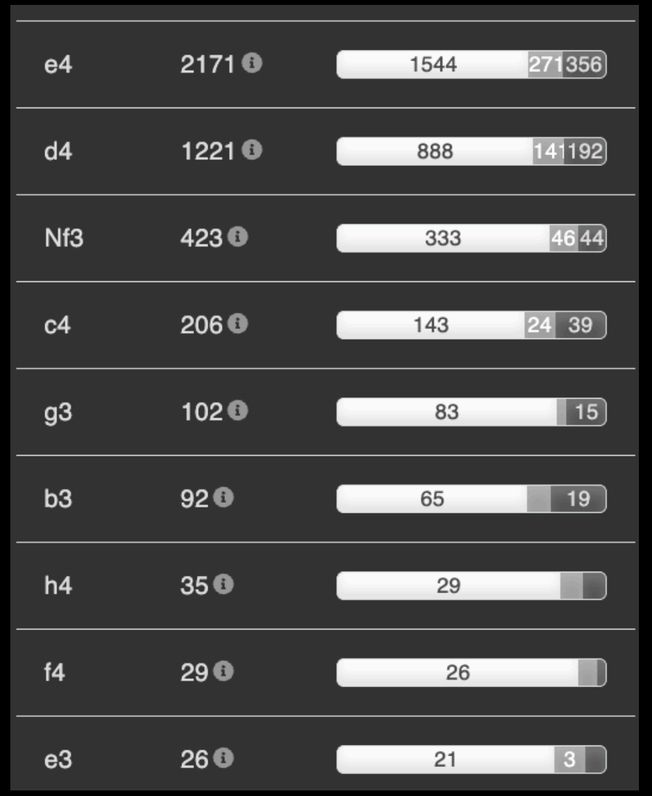
Nickname detection methodology

- **Stylometry.**
- ELO.
- Rivals, clubs, countries, etc.

How can we detect which nickname belongs to a chess player?

OTB games vs Online games





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Nickname detection methodology

- Stylometry.
- **ELO.**
- Rivals, clubs, countries, etc.

How can we detect which nickname belongs to a chess player?

Online ELO vs FIDE ELO

CHESS.COM BLITZ	BULLET (+/- 130) N=9249	RAPID (+/- 115) N=10193	USCF (+/- 130) N=1293	FIDE (+/- 85) N=1873
2000	1930	2035	1940	1925
2100	2035	2080	2005	1990
2200	2155	2135	2085	2055
2300	2255	2190	2185	2135
2400	2355	2235	2210	2210
2500	2465	2290	2260	2275
2600	2570	2355	2315	2350
2700	2670	2425	2435	2415
2800	2785	2480	2500	2470
2900	2875	2545	2575	2535
3000	2985	2625	2685	2590

BENIDORM CHESS OPEN

Nickname detection methodology

- Stylometry.
- **ELO.**
- Rivals, clubs, countries, etc.

How can we detect which nickname belongs to a chess player?

Online ELO vs FIDE ELO

CHESS.COM BLITZ	LICHESS BLITZ (+/- 75) N=2489	LICHESS BULLET (+/- 120) N=1945	LICHESS RAPID (+/- 100) N=1344	LICHESS CLASSICAL (+/- 85) N=314
2000	2100	2195	2185	2100
2100	2170	2255	2240	2125
2200	2235	2330	2285	2195
2300	2295	2400	2330	2245
2400	2370	2490	2380	2340
2500	2445	2560	2445	2360
2600	2560	2700	2510	2435
2700	2625	2765	2595	2500
2800	2695	2870	2630	
2900	2780	3005	2705	
3000	2850	3090	2735	

Nicknames found and linked

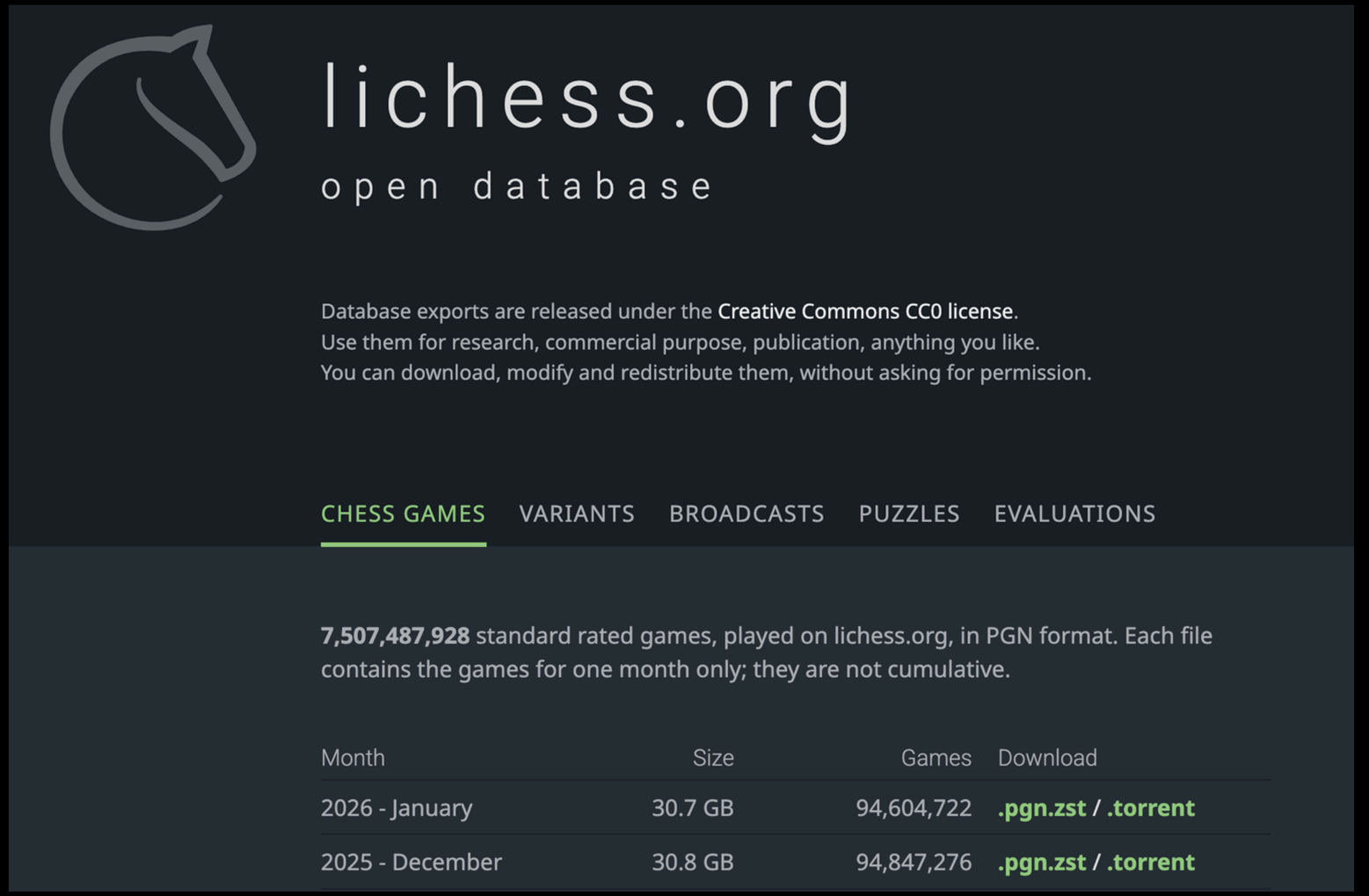
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	Open (977)	Woman (907)
Chess.com	202	545
Lichess.org	166	341

The methodology was also used with Spanish players at European and World Championships.

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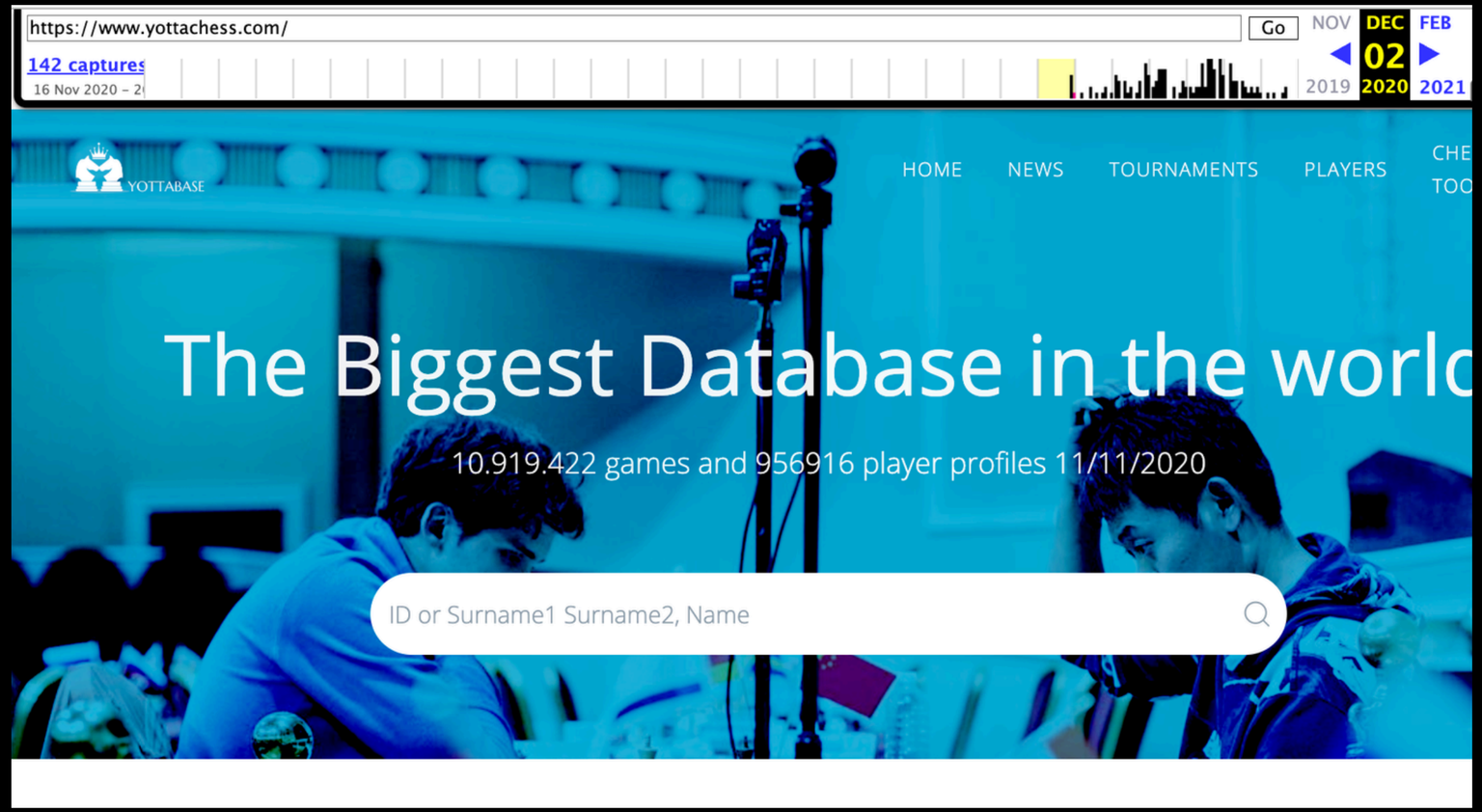
What happens if the users are deleted?



- Google Dorks
- https://database.lichess.org/
- https://web.archive.org/

BENIDORM CHESS OPEN

What happens if the users are deleted?



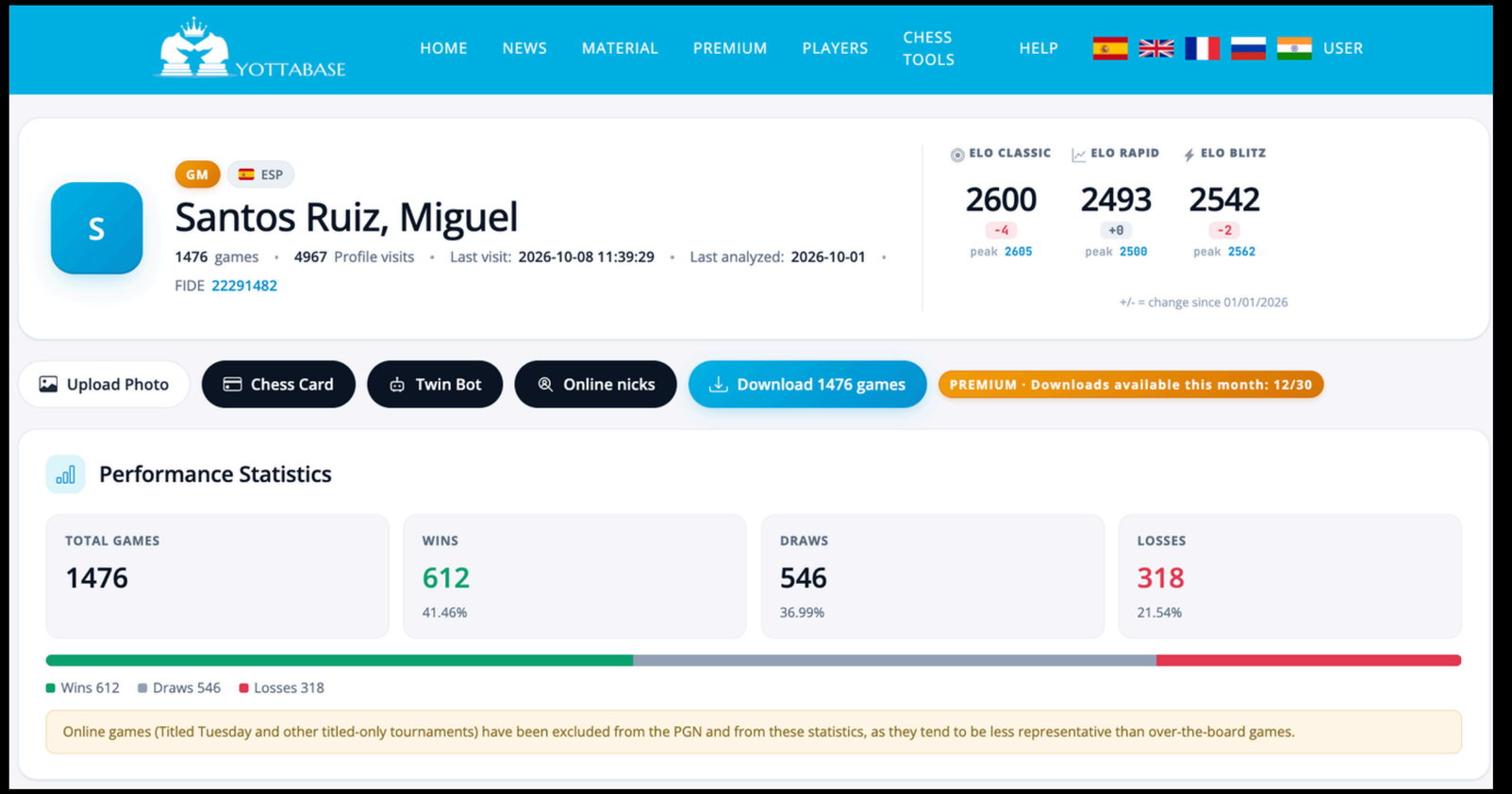
- Google Dorks
- https://database.lichess.org/
- https://web.archive.org/

BENIDORM CHESS OPEN

Nickname detection methodology

- Chess.com / Lichess.org.
- Chess-Results / Info64.
- **YottaChess** :-)

Over 38,000 associated nicknames.



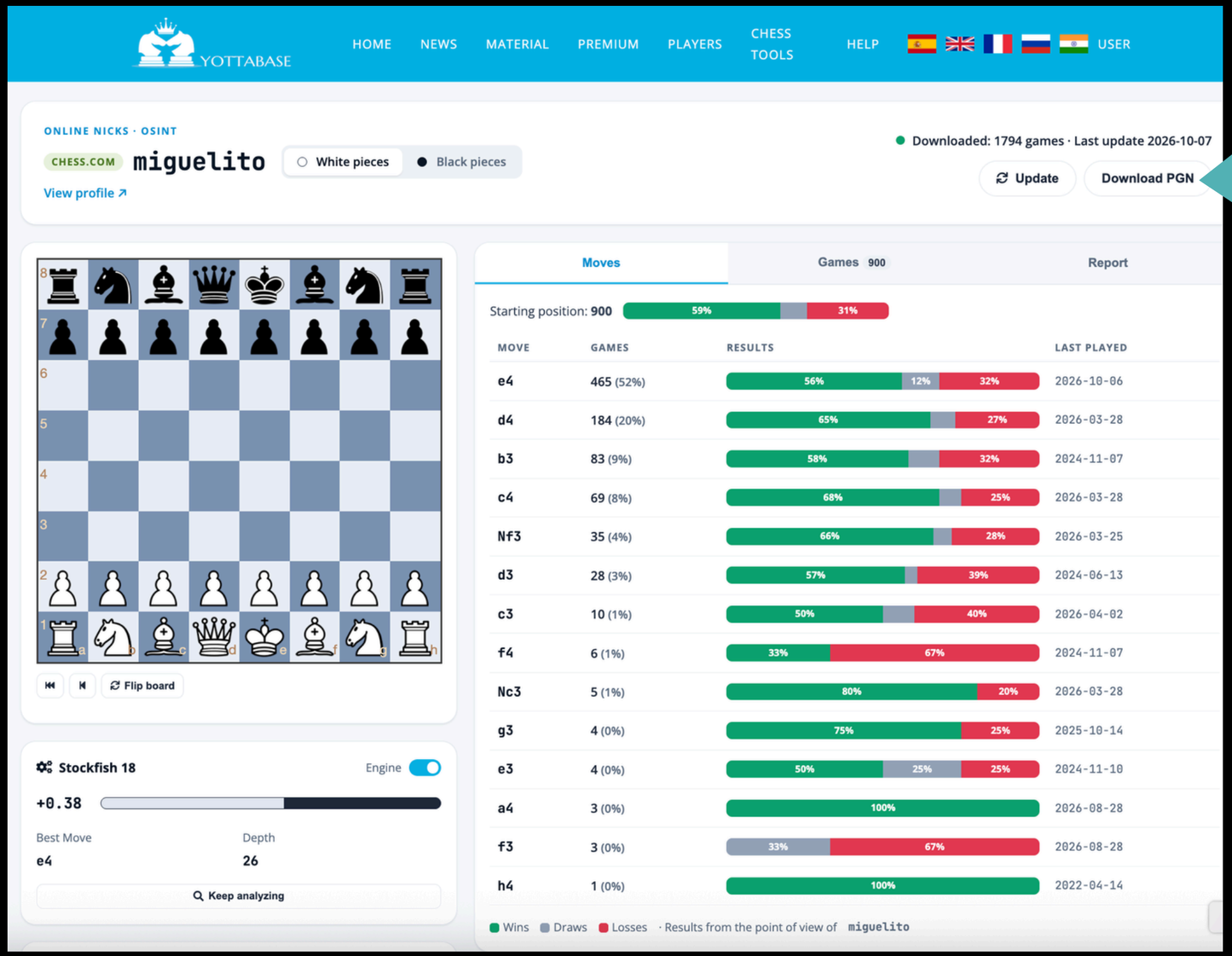
YottaChess premium tool

BENIDORM CHESS OPEN

Nickname detection methodology

- Chess.com / Lichess.org.
- Chess-Results / Info64.
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Over 38,000 associated nicknames.



YottaChess premium tool

Agenda

Data acquisition.

Use of AI in chess.

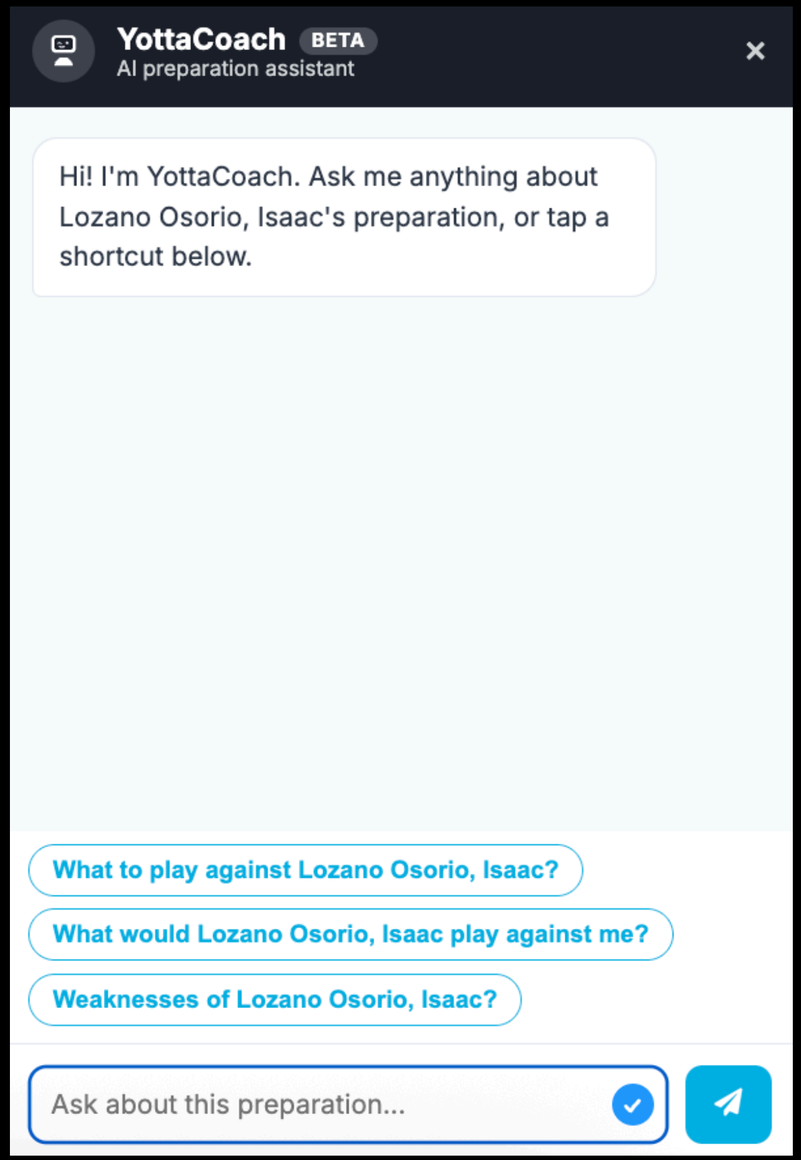
Your turn.

BENIDORM CHESS OPEN

BENIDORM CHESS OPEN

Use of AI in chess

- **Specialized chess tools.**
- Provide context for any LLM.
- Explainability is not a module.
- YottaCoach :-)



DecodeChess

Maia Chess

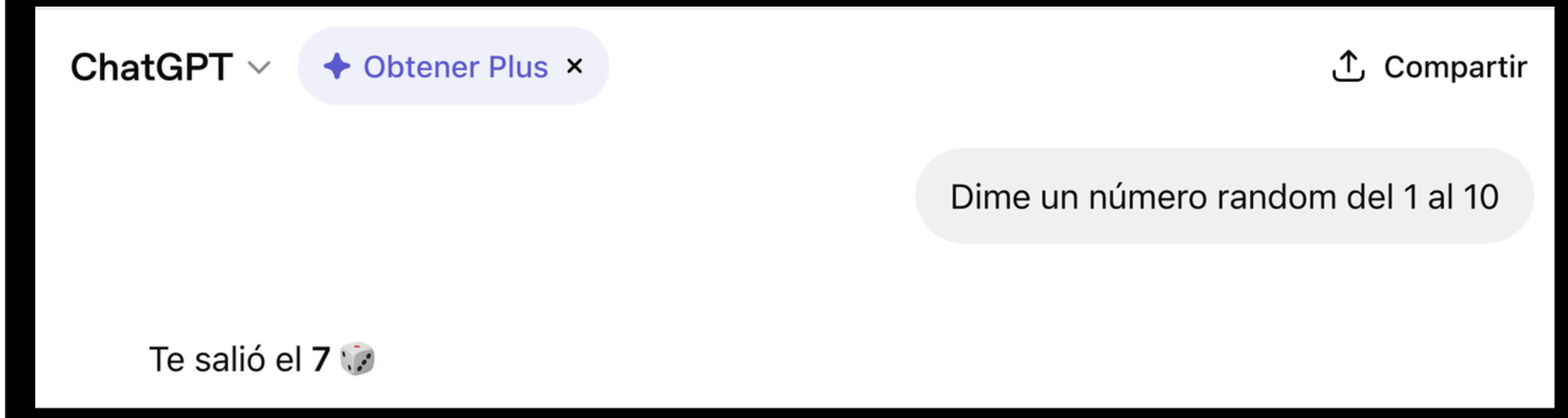
CHESSIGMA

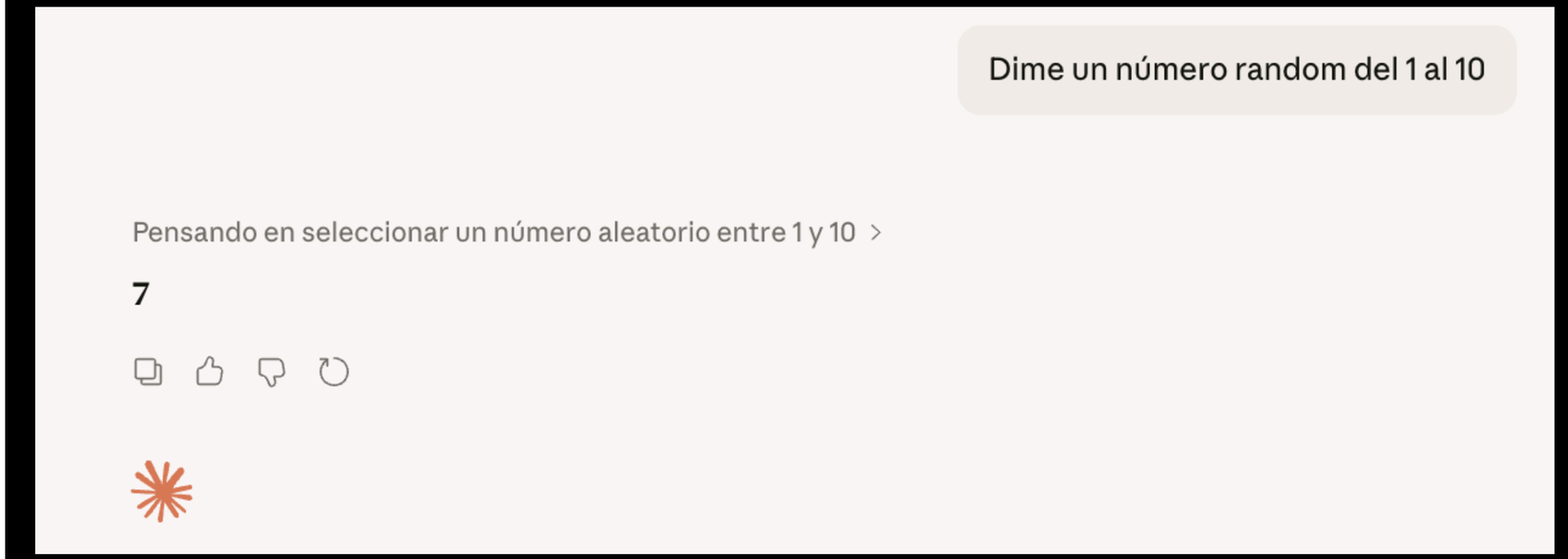
CHESSVIA

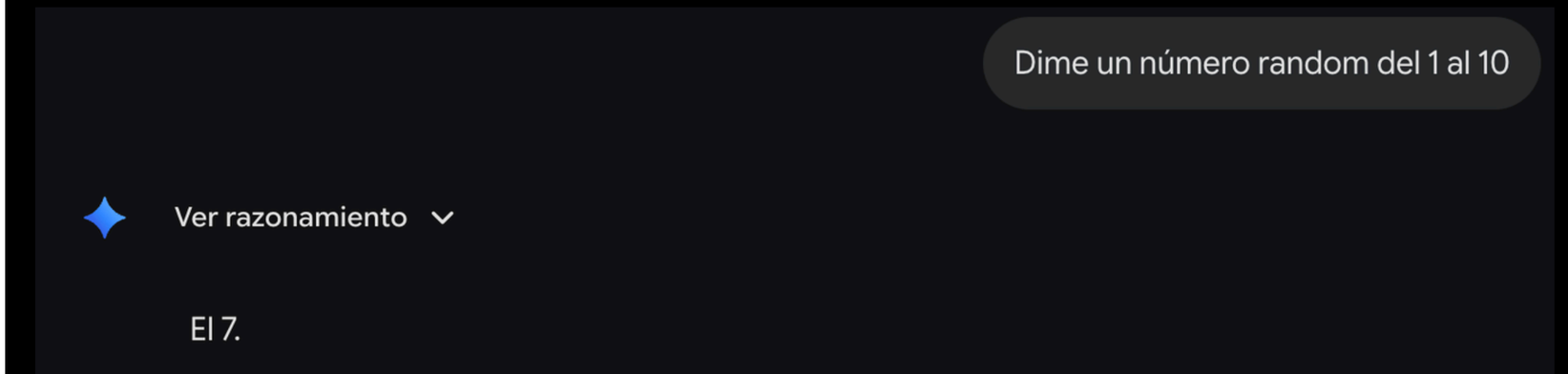
BENIDORM CHESS OPEN

Use of AI in chess

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BENIDORM CHESS OPEN

Use of AI in chess

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- **Explainability is not a module.**
- YottaCoach :-)

> What should I play with White against Isaac Lozano Osorio?

I couldn't find any public games by Isaac Lozano Osorio. The search only turned up profiles of other players on chessstats.app and in the FIDE rating lists, and nothing I could confidently attribute to him. Without his games, recommending an opening "against him" would mean making it up.

To prepare properly, I need to see what he plays with Black. You can send me that in two ways:

- **His Lichess or Chess.com username**, or his FIDE ID if he plays rated tournaments.
- **A PGN with some of his games as Black**, attached here.

With that, I can look at which defenses he uses against 1.e4 and 1.d4 and where he leaves known theory. I can also see which kinds of positions he loses most often: closed centers, endgames, attacks on the king… Then I'll suggest a concrete line and explain the plans, just as I did with the earlier position.

And if you're the Isaac in question and want to know what an opponent would play against you, send me your own games and I'll tell you where your weak spot is.

BENIDORM CHESS OPEN

Use of AI in chess

- Specialized chess tools.
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> *(Attached: lozano osorio, isaac (11).pgn)* Look at his YottaChess games

I went through all 82 games in the file. He has Black in 39 of them, played between 2013 and 2023 at ratings from 1650 to 2090. **My recommendation: 1.d4 with a kingside fianchetto (the Catalan).** That's his big weak spot.

Against 1.d4: the weak spot is g3

He always answers 1…Nf6 and 2…e6. What he does next depends on how you play:

- **If you play Nc3, he's very comfortable.** Against the Nimzo-Indian (…Bb4) he has 2.5 out of 3. He likes structures with …Bxc3 and bxc3 that leave White with doubled pawns, like the position we analyzed earlier.
- **If you fianchetto with g3, he falls apart: 0.5 out of 6.** He loses in the Catalan (1.d4 Nf6 2.c4 e6 3.g3), in the Queen's Indian with g3, and also after 1.d4 Nf6 2.g3 e6 3.Bg2 d5. His only half point was a draw in 2018. Several of those opponents were rated over 2200, but he also lost to a 2050 and a 1750.

Concrete line: 1.d4 Nf6 2.c4 e6 3.g3. Avoid 3.Nc3 at all costs.

- If he plays 3…Bb4+, trade with 4.Bd2. That way you keep the bishop pair and he can't double your pawns on c3.
- If he takes on c4 with …dxc4, aim to win the pawn back with Qc2 or Qa4. His …a6 and …b5 come too late, and the long diagonal of your g2-bishop does the work.

The plan is to bore him: slow pressure on b7 and the c6-square, without opening tactical lines. His losses in these positions are long games, over 50 moves, that slip away from him little by little.

BENIDORM CHESS OPEN

Use of AI in chess

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> Oh, look, I have his username: https://www.chess.com/member/[redacted]

I can't download his Chess.com games from here. Chess.com's API doesn't allow automated access from my tools, so I need you to send me the file. It's quick:

- **Option 1:** open `https://api.chess.com/pub/player[redacted]/games/2026/09/pgn` in your browser and save the file. Change the year and month to get more months; the last 6 to 12 months is enough.
- **Option 2:** go to his profile, open *Games* → *View all*, select the ones you want and click the download button.

Attach the PGN file or files here and I'll do the same as with the tournament games: build his opening tree as Black and his score in each line. I'll also compare what he plays online with his classical repertoire. Above all, I want to check whether he still struggles against the fianchetto or whether something has changed since 2023. His online games are much more recent, so they'll confirm or correct the Catalan recommendation.

> *(Attached [redacted] chesscom_white.pgn)* I downloaded them from https://www.yottachess.com/online-nicks/ and here they are :)

The file has 857 games, but **they're all with White**: the link you used ends in `?color=white`. To decide what you should play against him with White, I need the games where he has Black.

Download the same thing from the YottaChess page, but with Black:

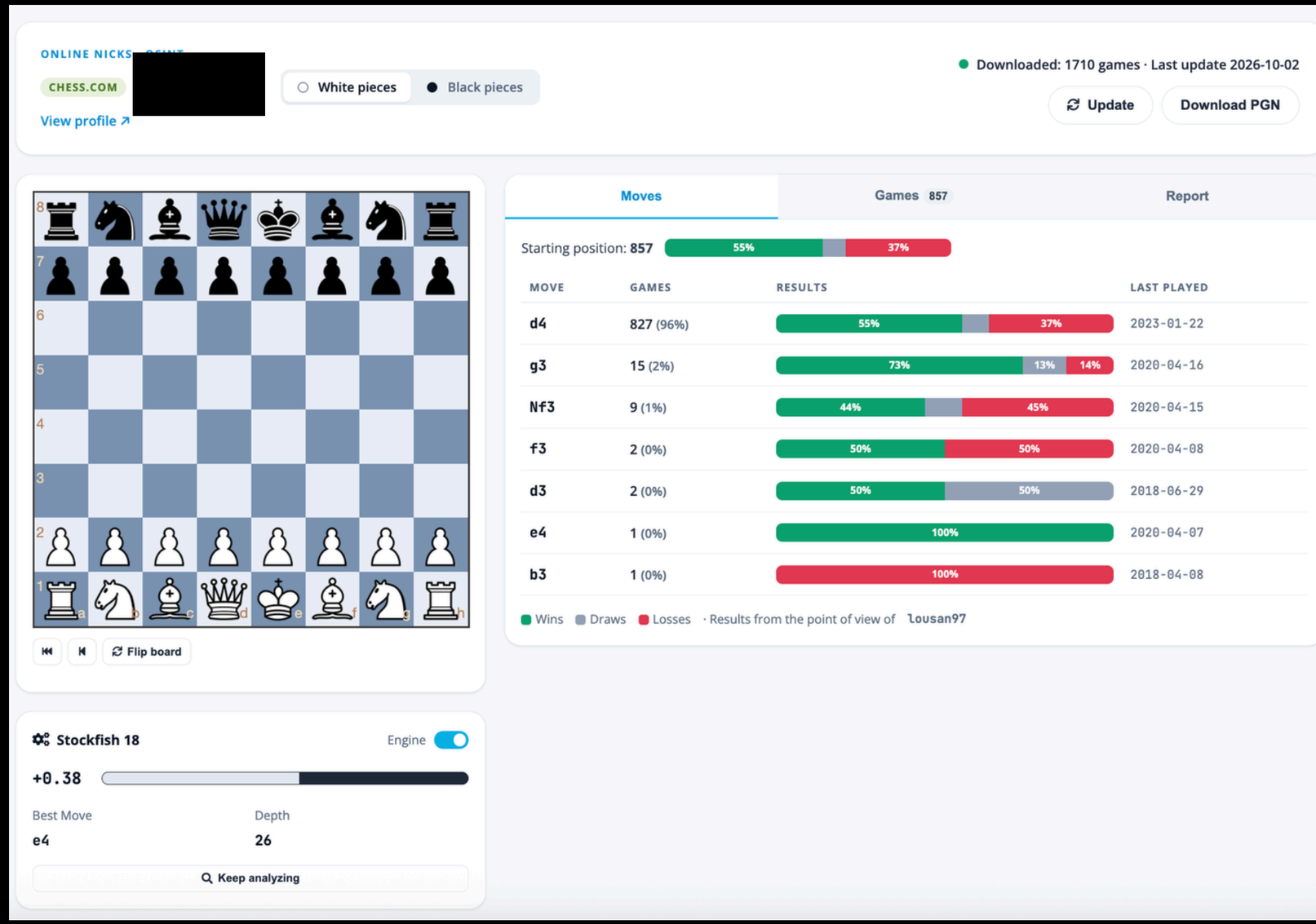
`https://www.yottachess.com/online-nicks/[redacted]chesscom?color=black`

Also keep in mind that these games run from November 2017 to January 2023, so they aren't any more recent than the tournament games. If the Black download also stops at that date, it won't confirm whether he has changed his repertoire since 2023. Even so, several hundred blitz games will give much more solid statistics than 39 classical games.

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The 853 online games, bullet and blitz from 2017 to January 2023, **partly correct what I told you before**. So that the strength of each opponent doesn't skew the picture, I compared his score in each line with what his rating predicts.

The Catalan: not the weak spot it seemed

Online, he scores almost exactly what his rating predicts against g3 fianchettos: 63 games, 1.7 percentage points below expectation, and practically no gap at all since 2021. The 0.5 out of 6 in classical games probably had more to do with how strong his opponents were (almost all over 2200) than with the opening. The Catalan is still a reasonable choice, but it doesn't hurt him in any special way.

The Caro-Kann line 4…Nf6 5.Nxf6+ exf6 isn't bad for him either. Online it's one of his best lines: 49 games, 7 points above expectation.

Where he does struggle

Line	Games	Score vs. his rating
Caro-Kann Advance: 3.e5 c5 4.dxc5	13	−27 points
Caro-Kann Fantasy: 3.f3	12	−19
1.d4 d5 2.c4 (Queen's Gambit)	24	−18
Caro-Kann Exchange: 3.exd5 cxd5 4.Bd3	26	−15

My recommendation now: 1.e4 and the Exchange Variation with Bd3

1.e4 c6 2.d4 d5 3.exd5 cxd5 4.Bd3 is the line with the most games behind it and a clear shortfall. It's easy to prepare, and it matches what I see in his classical games, where he also lost an Exchange Variation in 2023.

White's plan is simple:

1. **Development:** c3, Bf4, Nf3 and Qc2 or Nbd2. This is a reversed Carlsbad structure.
2. **Attack:** while he goes for the minority attack with …b5-b4, you play on the kingside. His losses in this line follow that pattern: he lacks active counterplay.

If you want something sharper, 3.e5 c5 4.dxc5 is where he scores worst. But it's only 13 games, and in classical play he won the only time he faced it (2022, with 5.Bb5 Qa5+). It works as a surprise weapon; as your main plan, I prefer the Exchange.

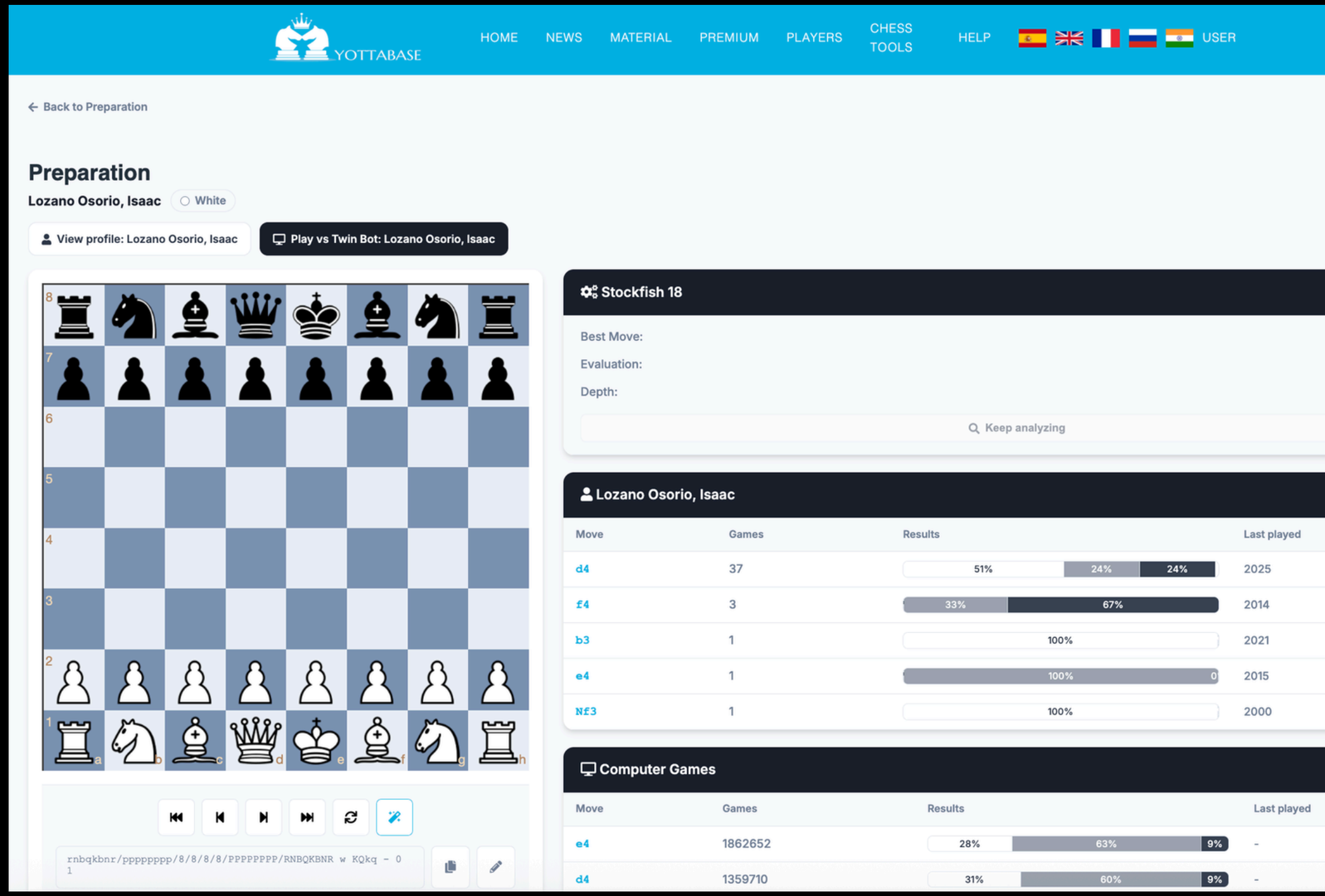
If you prefer 1.d4, keep one thing in mind. Online he answers …d5 about one time in four, and he struggles against 2.c4. But in classical games he always played 1…Nf6, so don't count on reaching the Queen's Gambit.

All these numbers come from fast games, with samples of 12 to 26 games per line, and none of the data is from after 2023. If he doesn't answer 1.e4 with 1…c6 when you play him, you'll have to improvise.

BENIDORM CHESS OPEN

Use of AI in chess

- Specialized chess tools.
- Provide context for any LLM.
- Explainability is not a module.
- **YottaCoach :-)**

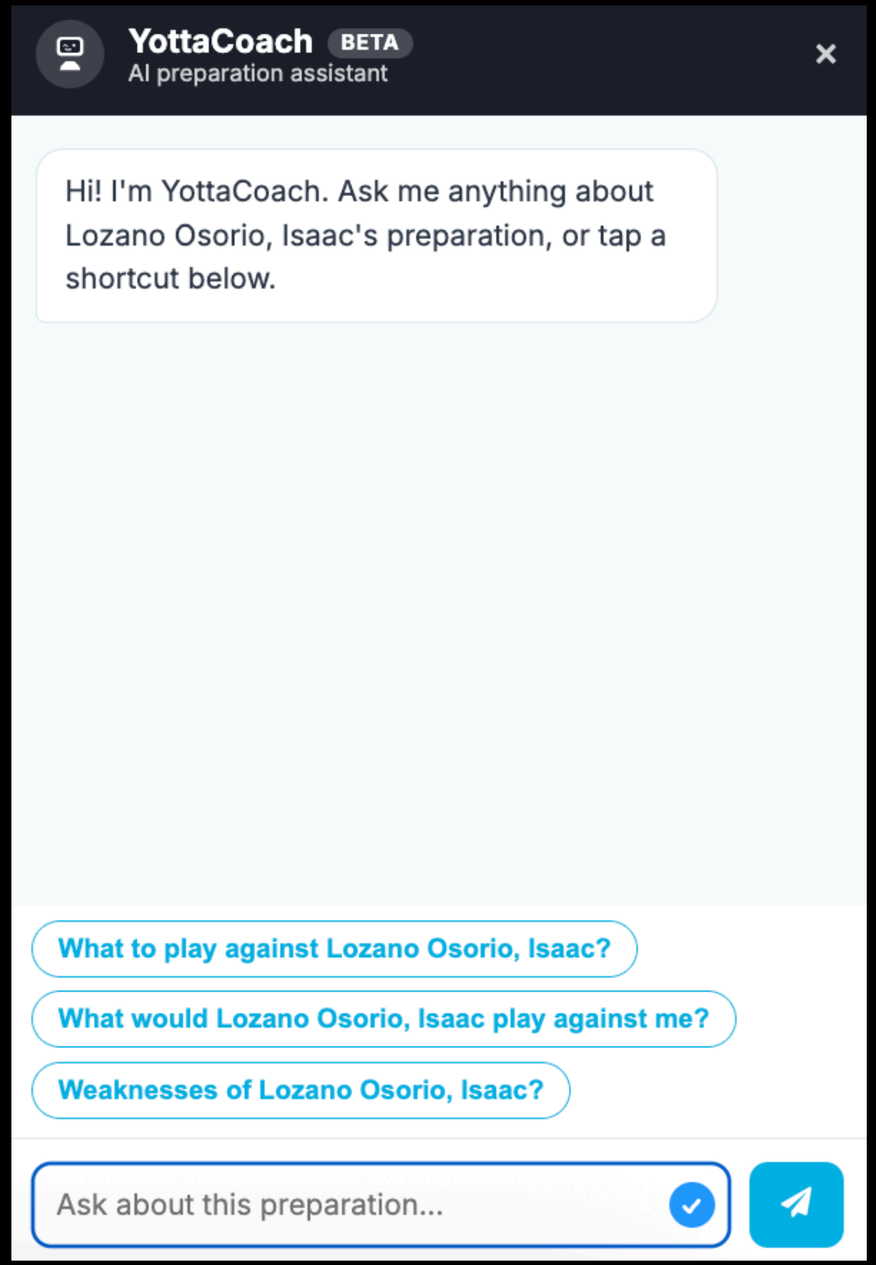


YottaChess premium tool

BENIDORM CHESS OPEN

Use of AI in chess

- Herramientas especializadas en ajedrez.
- En cualquier LLM, dar contexto.
- No son un módulo, explicabilidad.
- **YottaCoach :-)**



YottaChess premium tool

Agenda

Data acquisition.

Use of AI in chess.

Your turn.

BENIDORM CHESS OPEN

We will hold a contest featuring three 2-month subscriptions to YottaChess.



https://app.wooclap.com/LSUZBIP

Find the nicknames of the following players :-)

Join in and participate!

BENIDORM CHESS OPEN

Test yourself against your rival.

Remember the steps:

- Chess.com / Lichess.org.
- Chess-Results / Info64**.**
- YottaChess :-)

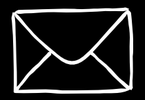
If you use AI, remember:

- Provide context.
- Use the module (your matches, theirs, etc.)
- Try providing it with information from several modules.
- Premium users → **YottaCoach**

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BENIDORM CHESS OPEN

Thanks!


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CHESS OPEN

Thanks!

10% CODE: **BENIDORM**

www.yottachess.com/premium
Only during the tournament
and limited to 10 people.

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