

This document contains visualizations for all time trend question and provides a brief interpretation of the trends observed in each plot.

```
Player with the highest Elo rating:
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```
Position (in January)      1
```

```
Name                      Carlsen
```

```
ELO                       2872
```

```
Date                     2020 Jan
```

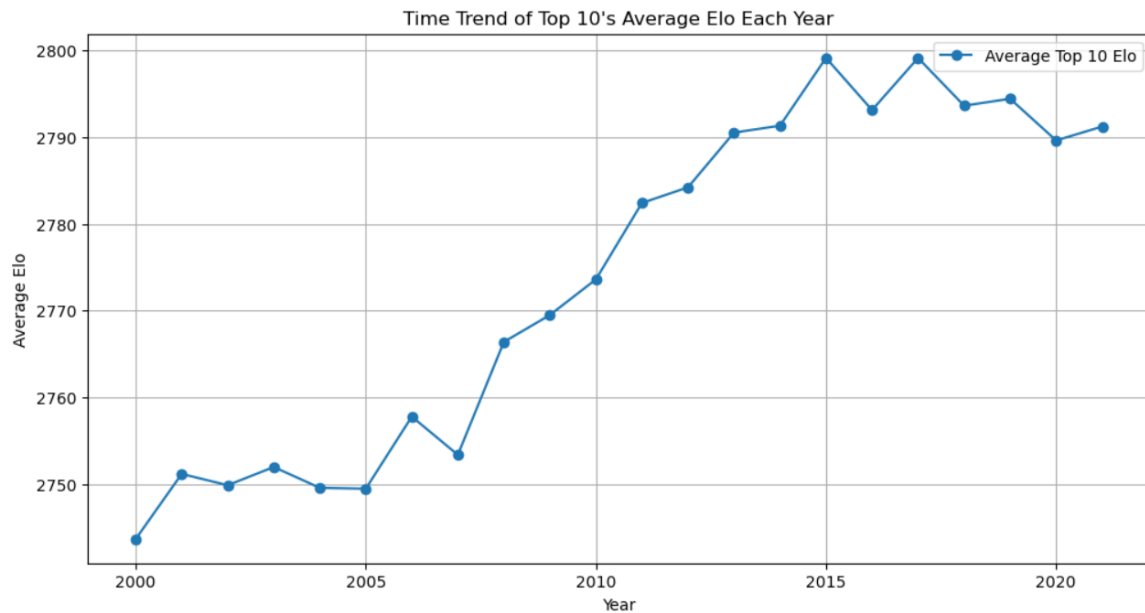
```
Age                       29
```

```
Year                     2020
```

```
Name: 20, dtype: object
```

```
Top 10 players with the highest Elo ratings:
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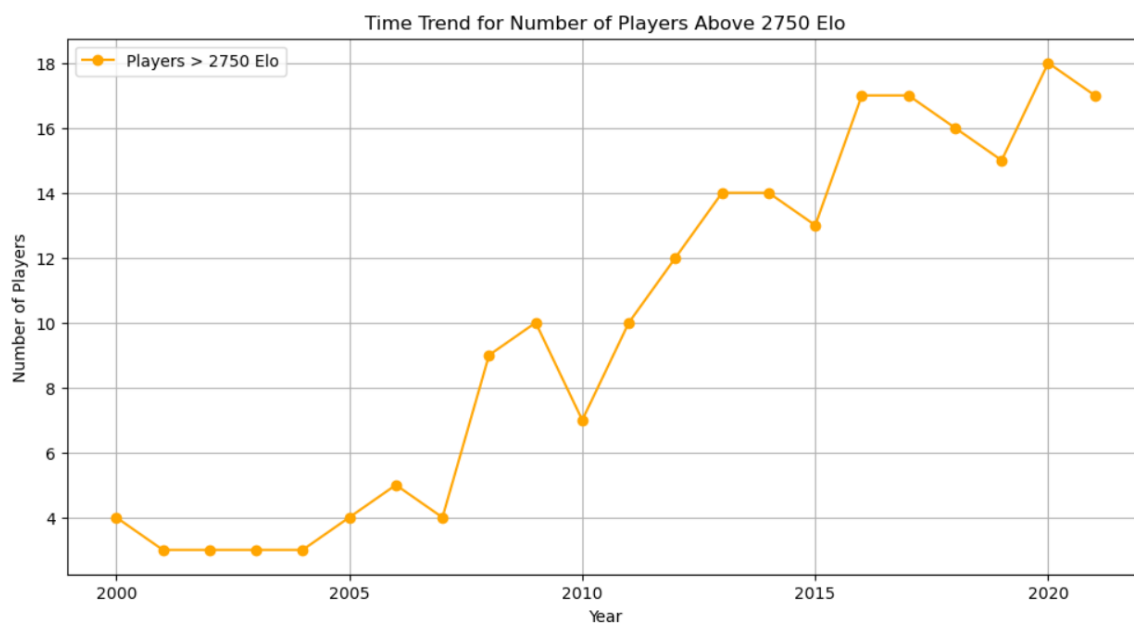
	Position (in January)	Name	ELO	Date	Age	Year
20	1	Carlsen	2872	2020 Jan	29	2020
140	1	Carlsen	2872	2014 Jan	23	2014
0	1	Carlsen	2862	2021 Jan	30	2021
120	1	Carlsen	2862	2015 Jan	24	2015
160	1	Carlsen	2861	2013 Jan	22	2013
420	1	Kasparov	2851	2000 Jan	36	2000
400	1	Kasparov	2849	2001 Jan	37	2001
360	1	Kasparov	2847	2003 Jan	39	2003
100	1	Carlsen	2844	2016 Jan	25	2016
80	1	Carlsen	2840	2017 Jan	26	2017



The average Elo rating of the top 10 players shows a general upward trend from 2000 to 2014, indicating an increase in the skill level of the top players during this period.

There are periods of stabilization and slight dips, reflecting times when the top-tier competition may have consolidated rather than expanded.

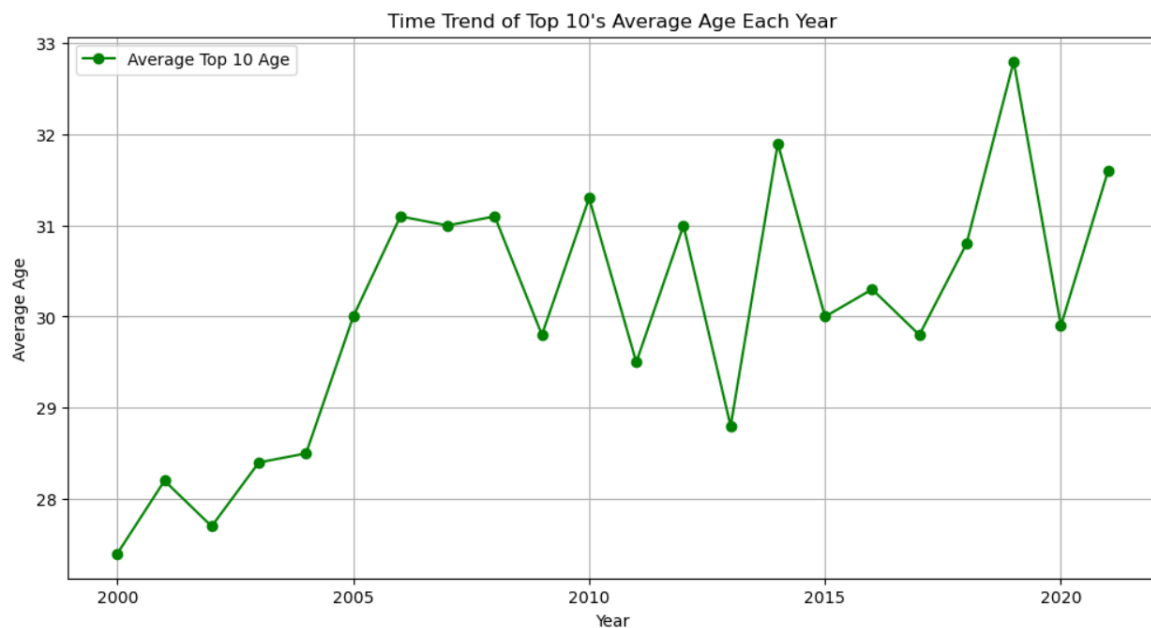
After 2014, the average Elo stabilizes and fluctuates slightly between 2790 and 2800, suggesting that the top players have reached a competitive ceiling or plateau in terms of ratings.



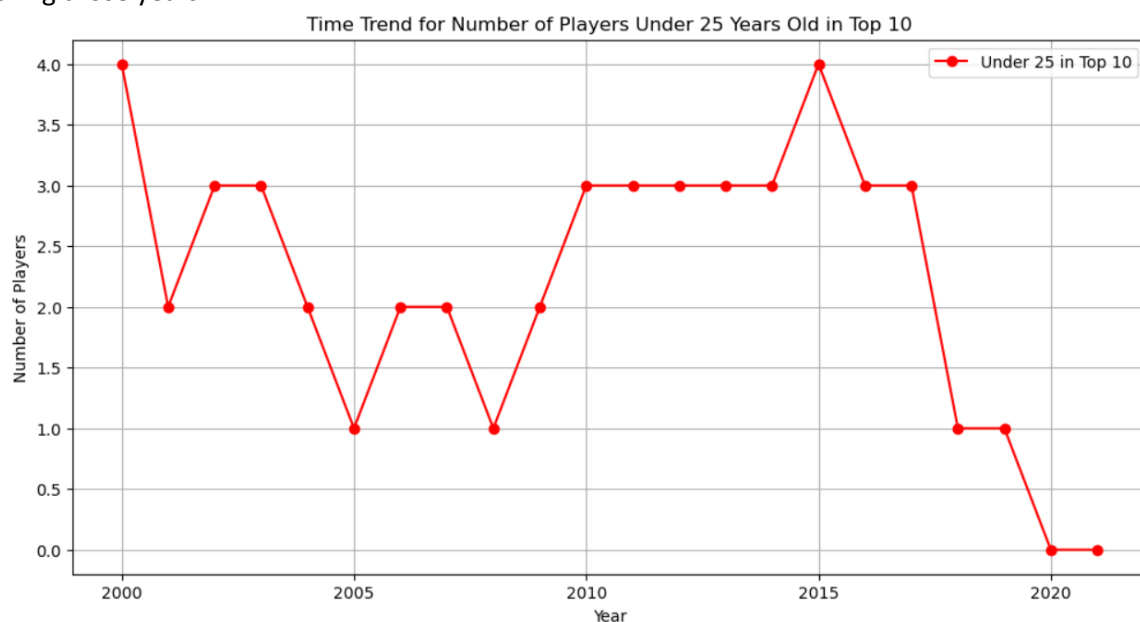
From 2000 to 2005, the number of players exceeding 2750 Elo remained very low (around 3-4 players).

After 2008, there was a significant rise in the number of players surpassing 2750, peaking at 18 players in 2019-2020.

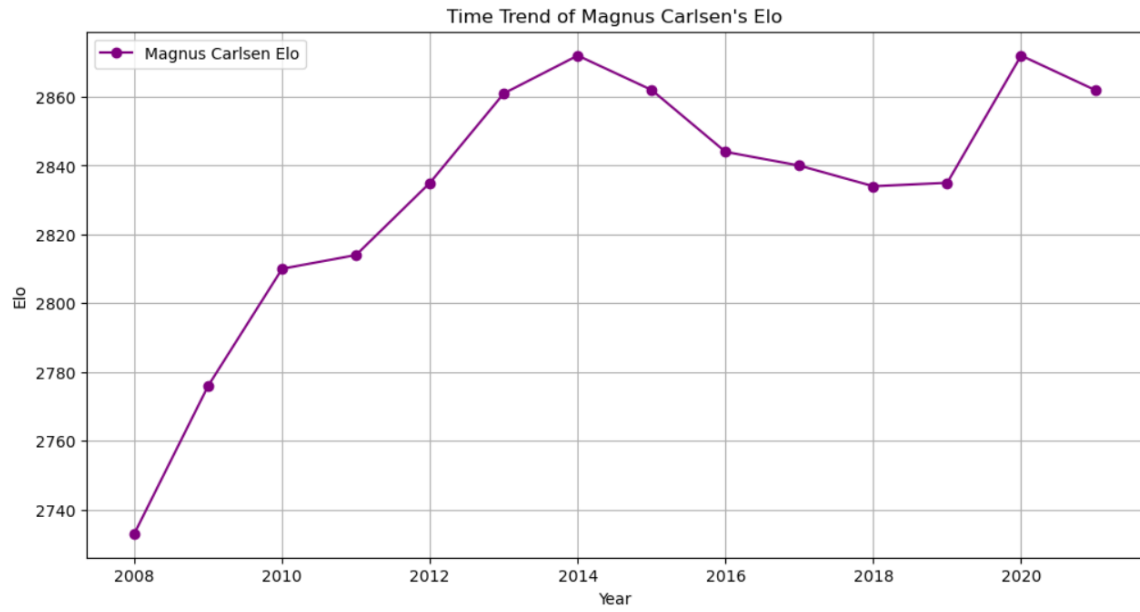
This trend indicates that the pool of elite players has broadened significantly over the last two decades, with more players achieving exceptionally high ratings.



The average age of the Top 10 players shows a gradual upward trend over the years. Around 2005, there is a noticeable increase, with average ages rising above 30 and fluctuating between 30 and 32 for most of the timeline. In recent years (2019–2021), the average age remains relatively high, suggesting that older players dominate the Top 10. However, there are some dips, possibly indicating a rise in young prodigies entering the top ranks during those years.



The number of top 10 players under the age of 25 has fluctuated significantly and it has decreased over time. From 2000 to 2015, the count fluctuates, reaching peaks (e.g., 4 players around 2000 and 2015). After 2016, the number drops sharply to almost zero, indicating that younger players have become less frequent in the Top 10 rankings.



2008–2014: Carlsen's Elo rose sharply, reaching a peak of 2882, marking his dominance.

2014–2018: A slight decline and stabilization around 2840–2850 indicate consistent performance.

2019–2020: Elo surged again, nearing his peak levels.

Overall: Carlsen maintained exceptional consistency, staying at the top for over a decade.