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A Detailed Analysis of Roger Federer's Results

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Introduction

This report is about **Roger Federer**, who is a tennis player from Switzerland. He turned pro in 1998 and is not active any more. He was born on 08 August 1981, so he is now 41 years old.

Roger Federer is a righty and has a one-handed backhand.

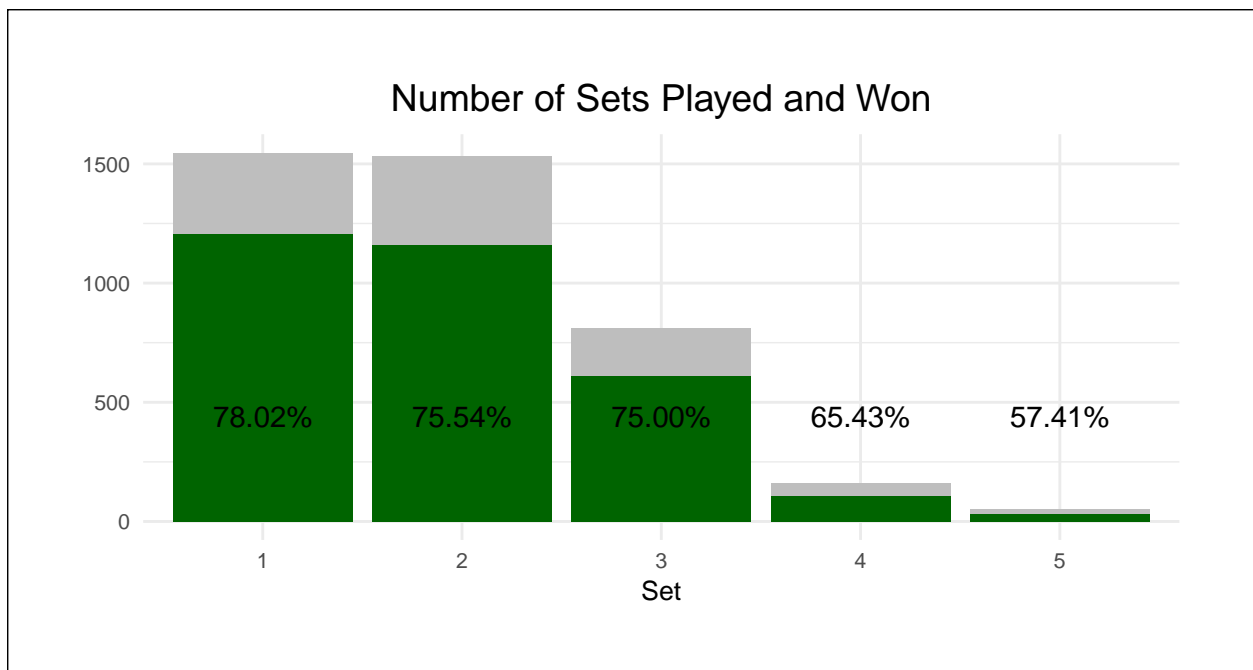
He played 1549 matches in total. The highest ranking achieved is 1.

Winning percentages

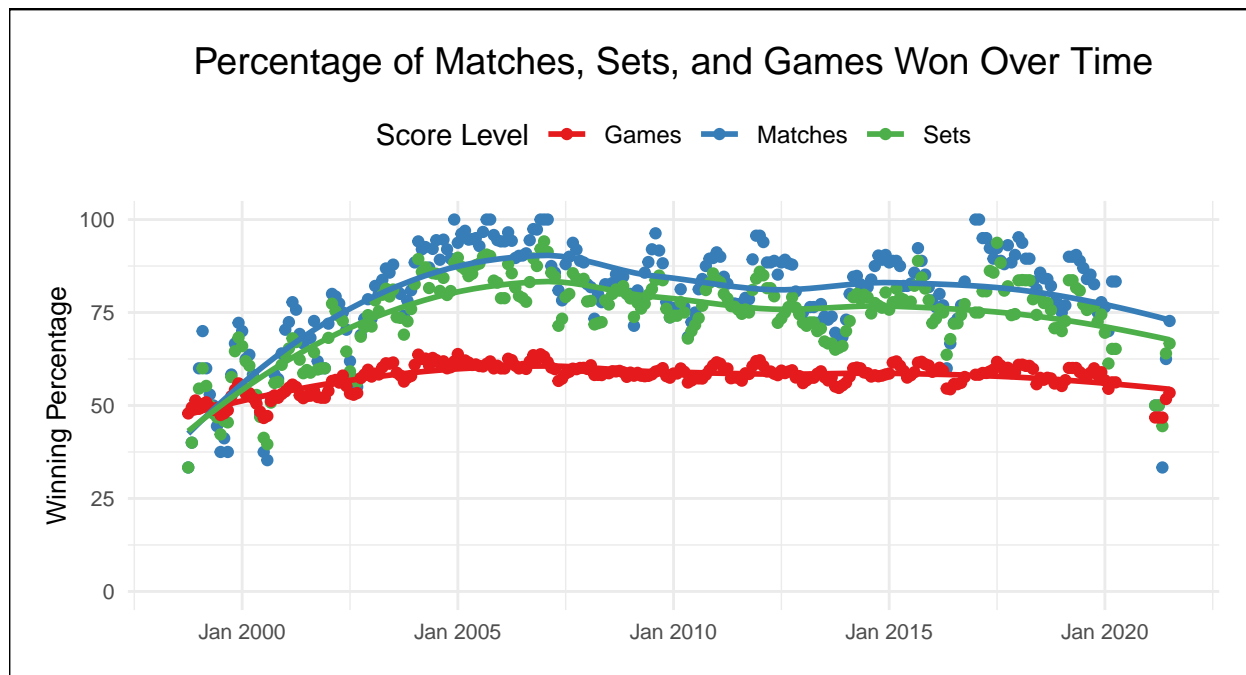
Here are a few interesting match winning percentages:

Category	Winning Percentage
Total	81.79%
Outdoor	82.05%
Indoor	81.00%
Hard court	83.42%
Clay court	75.58%
Grass court	86.67%
Best of three	80.10%
Best of five	84.58%
Against players with a one-handed backhand	85.22%
Against players with a two-handed backhand	80.85%
Against top 10 players	64.55%

The following figure shows the number of first, second, third, fourth, and fifth sets played and won including the winning percentages:



In the following figure, you can see the winning percentages (matches, sets, and games) over time:

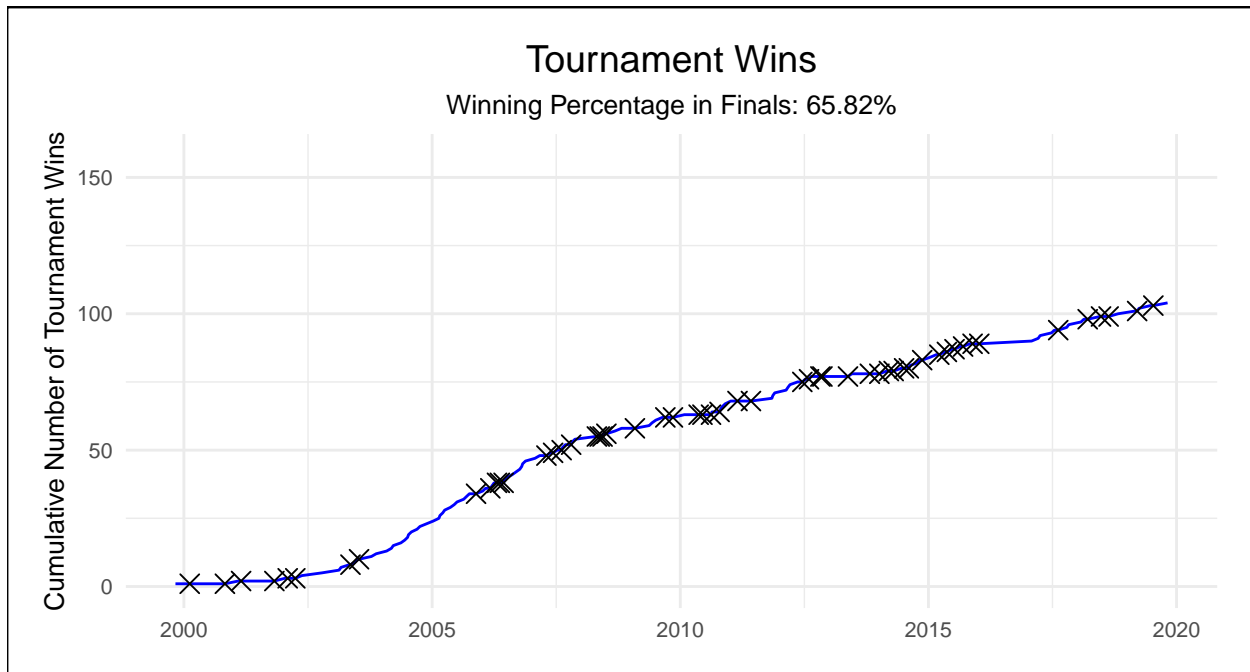


Tournaments

The match winning percentages at the Grand Slams are as follows:

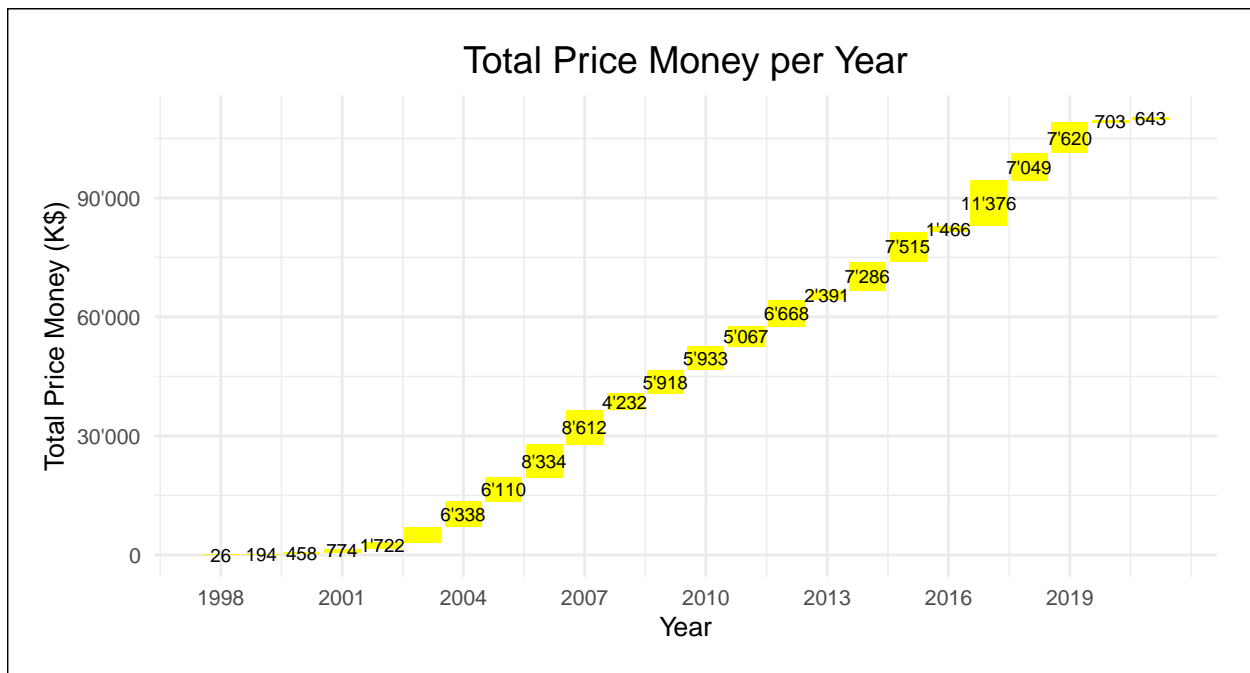
Tournament	Match Winning Percentage
Australian Open	87.18%
Roland Garros	81.11%
US Open	86.41%
Wimbledon	88.24%

In the figure on the next page, you can see the cumulative number of tournament wins. Black crosses indicate finals that Roger Federer lost.



Price Money

Roger Federer's total price money is 110'311'505\$. The following figure shows how it developed over time.



What affects the winning probability of Roger Federer?

We have estimated the effect of some variables on the winning probability, using a linear probability model. The following table shows the results:

Predictor	B	SE	t	p
Intercept	0.88	0.296	2.964	0.003
Tournament at Home	0.05	0.047	1.051	0.293
Outdoor	-0.02	0.032	-0.543	0.587
Surface: Carpet	-0.25	0.065	-3.928	<0.001
Surface: Clay	-0.06	0.029	-2.259	0.024
Surface: Grass	0.02	0.032	0.756	0.450
Total Prize Money (m\$)	0.00	0.003	-0.234	0.815
Opponent: Rank	0.00	0.000	4.988	<0.001
Opponent: Age	0.01	0.003	3.442	<0.001
Opponent: Height	0.00	0.001	-1.224	0.221
Opponent: Lefty	-0.04	0.034	-1.036	0.300
Opponent: One Handed Backhand	0.04	0.024	1.731	0.084
Best of Five	0.03	0.034	0.789	0.430

The base group is Hard for the surface.

Here are a few interesting observations:

- It did not influence the winning probability whether Roger Federer played at home or not.
- It seems that the order of preference for the surface was: Grass, Hard, and Clay (ignoring Carpet).
- The rank of the opponent did not substantially affect the winning probability.
- The winning probability increased with the age of the opponent.
- The winning probability was larger against players with a one-handed backhand.

It should be noted that the R-squared is 0.05, which is very low.

Wins With Fewer Games Than the Opponent

Roger Federer won 4 matches with fewer games than the opponent. You can see them in the following table:

Date	Tournament	Tournament Country	Surface	Round	Opponent	Opponent Country	Result	Games Won	Games Lost
Jan 2020	Australian Open	AUS	Hard	Quarter-Finals	Tennys Sandgren	USA	6:3, 2:6, 2:6, 7:6, 6:3	23	24
May 2019	ATP Masters 1000 Rome	ITA	Clay	Round of 16	Borna Coric	CRO	2:6, 6:4, 7:6	15	16
Jun 2015	Halle	GER	Grass	Round of 32	Philipp Kohlschreiber	GER	7:6, 3:6, 7:6	17	18
Jun 2009	Wimbledon	GBR	Grass	Finals	Andy Roddick	USA	5:7, 7:6, 7:6, 3:6, 16:14	38	39