



Introduction to Data Management PROJECT REPORT

(Project Semester August-December 2020)

PROJECT REPORT

ON

Analyzing Top Chess Players till August 2020

Submitted by

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DECLARATION

I, Shiv Chandra, student of Computer Science & Engineering under CSE/IT Discipline at, Lovely Professional University, Punjab, hereby declare that all the information furnished in this project report is based on my own intensive work and is genuine.

Date: 13/12/2021

Shiv Chandra

Registration No: 11904848

Signature:



ACKNOWLEDGEMENT

Primarily I'd thank God for being able to complete my project with success. Then I'd like to thank my mentor **Ms. Sandeep Kaur**, whose valuable guidance has been the ones that helped me patch this project and make it full proof success in contribution towards the completion of this project.

Last but not least I'd rather thanks to **Lovely Professional University**, and my parent's inspiration, who gave me this golden opportunity to learn many new things, to learn another aspect of life.

Shiv Chandra

CONTENTS:

Sr No.	Title	Page No.
1	Introduction	5
2	Objectives/Scope of the Analysis	6
3	Source of dataset	7
4	ETL Process	9
5	Analysis of dataset	18
6	List of Analysis with results	29
7	Final Dashboard	34
8	Bibliography	35

INTRODUCTION

- Data management is important because the data your organization creates is a very valuable resource.
- The last thing you want to do is spend time and resources collecting data and business intelligence, only to lose or misplace that information.
- In that case, you would then have to spend time and resources again to get that same business intelligence you already had.
- And on that data analysis is carried out which show visualization of our problems in efficient way.
- Data Analysis is a process of inspecting, cleansing, transforming, and modeling data with the goal of discovering useful information, informing conclusions, and supporting decision- making.
- This project is based on such data analysis about Top Chess Players till August 2020.
- This dataset contains all old games played in all formats like Standard, Blitz and Rapid. Moreover, it also includes player name, year of birth, federation and fide Id.
- This IMDb dataset contains 10 data fields.

OBJECTIVES/SCOPE OF ANALYSIS

After analysis of the dataset, the aim of this project is to give answer of given objectives in an easy way:

- What are the top 5 female players according to standard rating?
- What are the top male players who was born after 1990 according to Blitz rating?
- What are top the players who has GM norm title and also from Russia federation?
- Name the top player who has standard rating more than both of Rapid and Blitz rating?
- What are the top federations who has IM norm title according to standard rating?

SOURCE OF DATASET

Source of dataset:

<https://www.kaggle.com/vikasojha98/world-top-chess-players-august-2020>

The dataset is based on World Top Chess Players till August 2020. The columns included in the dataset are given below:

- Fide Id
 - The Id of Players
- Name
 - The Name of the Players
- Federation
 - The Country of the Players
- Gender
 - Male or Female Players
- Year of Birth
 - Birth year of the Player
- Standard Rating
 - The Classical Chess Rating of Players
- Rapid Rating
 - The Rapid Ratings of Players
- Blitz Rating
 - Blitz Format Rating of Players

- Inactive Flag
 - ➔ Completely Missing
- Title
 - ➔ Highest title achieved by Players

Sample of dataset with data fields is given below:

	A	B	C	D	E	F	G	H	I	J
1	Fide id	Name	Federation	Gender	Year_of_birth	Title	Standard_Rating	Rapid_rating	Blitz_rating	Inactive_flag
2	1503014	Carlsen, Magnus	NOR	M	1990	GM	2863	2881	2886	
3	2020009	Caruana, Fabiano	USA	M	1992	GM	2835	2773	2711	
4	4100018	Kasparov, Garry	RUS	M	1963	GM	2812	2783	2801	i
5	8603677	Ding, Liren	CHN	M	1992	GM	2791	2836	2788	
6	4168119	Nepomniachtchi, Ian	RUS	M	1990	GM	2784	2778	2785	
7	623539	Vachier-Lagrave, Maxime	FRA	M	1990	GM	2778	2860	2822	
8	4126025	Grischuk, Alexander	RUS	M	1983	GM	2777	2784	2765	
9	13300474	Aronian, Levon	ARM	M	1982	GM	2773	2778	2739	
10	5202213	So, Wesley	USA	M	1993	GM	2770	2741	2816	
11	13400924	Radjabov, Teimour	AZE	M	1987	GM	2765	2758	2757	
12	24116068	Giri, Anish	NED	M	1994	GM	2764	2731	2752	
13	13401319	Mamedyarov, Shakhriyar	AZE	M	1985	GM	2764	2761	2716	
14	8602883	Wang, Hao	CHN	M	1989	GM	2763	2750	2712	
15	738590	Rapport, Richard	HUN	M	1996	GM	2760	2727	2759	
16	3503240	Dominguez Perez, Leinier	USA	M	1983	GM	2758	2786	2654	
17	5000017	Anand, Viswanathan	IND	M	1969	GM	2753	2751	2785	
18	1170546	Duda, Jan-Krzysztof	POL	M	1998	GM	2753	2774	2799	
19	4101588	Kramnik, Vladimir	RUS	M	1975	GM	2753	2756	2797	i
20	14109603	Karjakin, Sergey	RUS	M	1990	GM	2752	2709	2765	
21	2016192	Nakamura, Hikaru	USA	M	1987	GM	2736	2829	2900	
22	2900084	Topalov, Veselin	BUL	M	1975	GM	2735	2707	2667	
23	5007003	Harikrishna, Pentala	IND	M	1986	GM	2732	2705	2614	
24	8603405	Wei, Yi	CHN	M	1999	GM	2732	2752	2686	
25	12573981	Firouzja, Alireza	FID	M	2003	GM	2728	2703	2770	
26	4158814	Andreikin, Dmitry	RUS	M	1990	GM	2726	2740	2782	
27	5029465	Vidit, Santosh Gujrathi	IND	M	1994	GM	2726	2636	2735	
28	4102142	Svidler, Peter	RUS	M	1976	GM	2723	2742	2754	

Fig.1 Original Dataset

ETL PROCESS

- **ETL** is a process that extracts the data from different source systems, then transforms the data (like applying calculations, concatenations, etc.) and finally loads the data into the Data Warehouse system.
- Full form of ETL is Extract, Transform and Load.
- The triple combination of ETL provides crucial functions that are many times combined into a single application or suite of tools that help in the following areas:
 - Enhances Business Intelligence solutions for decision making.
 - Allows verification of data transformation, aggregation and calculations rules.
 - Allows sample data comparison between source and target system.
 - Helps to improve productivity as it codifies and reuses without additional technical skills.
- Initially, the raw dataset was arranged as shown in given picture:

	A	B	C	D	E	F	G	H	I	J
1	Fide id	Name	Federation	Gender	Year_of_birth	Title	Standard_Rating	Rapid_rating	Blitz_rating	Inactive_flag
2	1503014	Carlsen, Magnus	NOR	M	1990	GM	2863	2881	2886	
3	2020009	Caruana, Fabiano	USA	M	1992	GM	2835	2773	2711	
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9	13300474	Aronian, Levon	ARM	M	1982	GM	2773	2778	2739	
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12	24116068	Giri, Anish	NED	M	1994	GM	2764	2731	2752	
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14	8602883	Wang, Hao	CHN	M	1989	GM	2763	2750	2712	
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16	3503240	Dominguez Perez, Leinier	USA	M	1983	GM	2758	2786	2654	
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18	1170546	Duda, Jan-Krzysztof	POL	M	1998	GM	2753	2774	2799	
19	4101588	Kramnik, Vladimir	RUS	M	1975	GM	2753	2756	2797	i
20	14109603	Karjakin, Sergey	RUS	M	1990	GM	2752	2709	2765	
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22	2900084	Topalov, Veselin	BUL	M	1975	GM	2735	2707	2667	
23	5007003	Harikrishna, Pentala	IND	M	1986	GM	2732	2705	2614	
24	8603405	Wei, Yi	CHN	M	1999	GM	2732	2752	2686	
25	12573981	Firouzja, Alireza	FID	M	2003	GM	2728	2703	2770	
26	4158814	Andreikin, Dmitry	RUS	M	1990	GM	2726	2740	2782	
27	5029465	Vidit, Santosh Gujrathi	IND	M	1994	GM	2726	2636	2735	
28	4102142	Svidler, Peter	RUS	M	1976	GM	2723	2742	2754	

Fig.1.2 Initial Dataset

Initially Missing Values In Dataset

Each columns missing values shown below :-

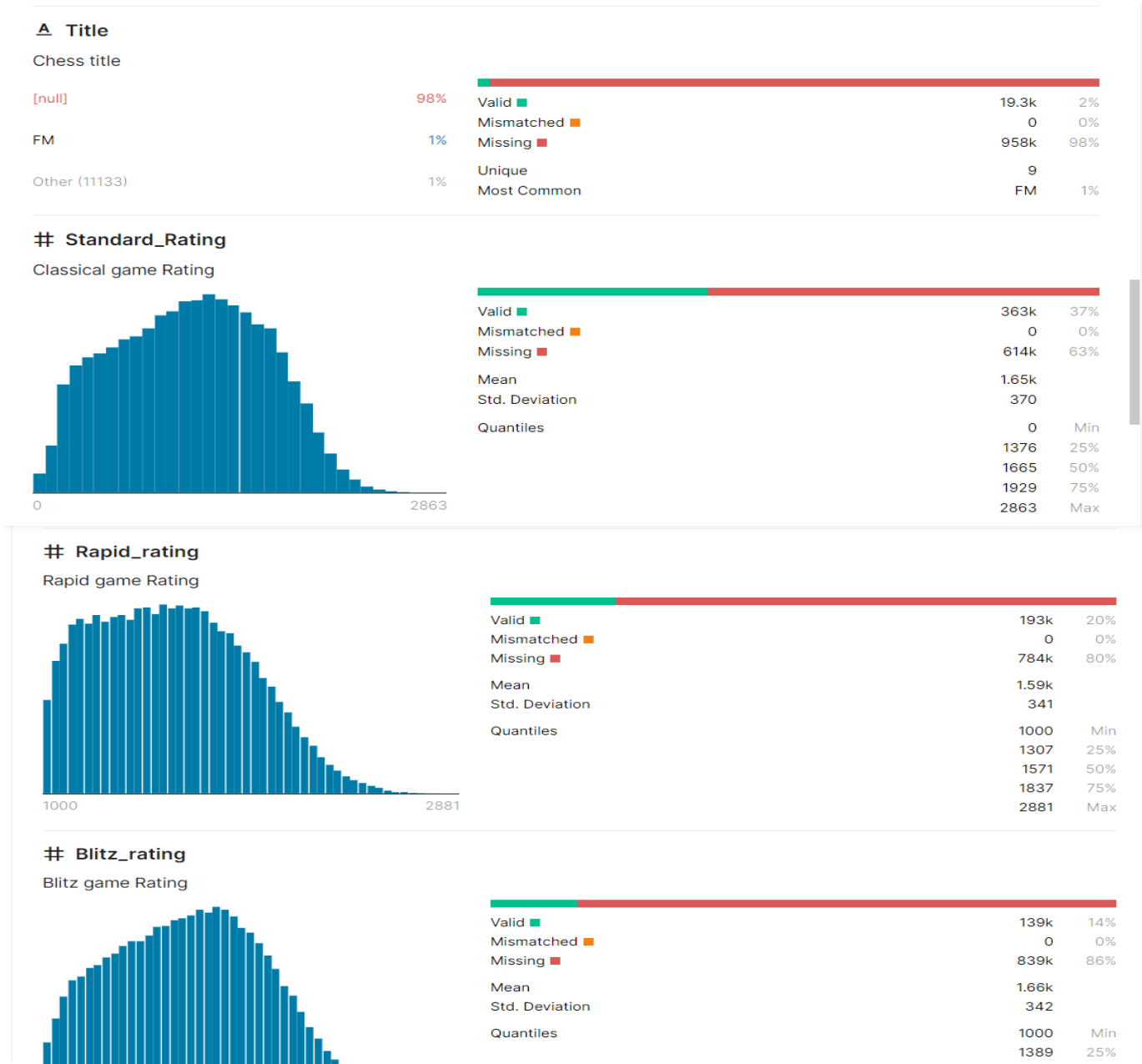


Fig.1.3. Missing Values

Disorganized Name Column

Name column had last name first before first name of each player.

You can see in below picture: -

Name
Carlsen, Magnus
Caruana, Fabiano
Kasparov, Garry
Ding, Liren
Nepomniachtchi, Ian
Vachier-Lagrave, Maxime
Grischuk, Alexander
Aronian, Levon
So, Wesley
Radjabov, Teimour
Giri, Anish
Mamedyarov, Shakhriyar
Wang, Hao

Fig.1.4 Disorganized Column

It is Magnus Carlsen **Not** Carlen Magnus and each column

Also contain comma ‘,’ as a separator.

Tableau Prep Builder

Tableau Prep Builder is a tool in the Tableau product suite designed to make preparing your data easy and intuitive. Use Tableau Prep Builder to combine, shape, and clean your data for analysis in Tableau.

Using Tableau Prep Builder

Start by connecting to your data from a variety of files, servers, or Tableau extracts. Connect to and combine data from multiple data sources. Drag and drop or double-click to bring your tables into the flow pane, and then add flow steps where you can then use familiar operations such as filter, split, rename, pivot, join, union and more to clean and shape your data.

Each step in the process is represented visually in a flow chart that you create and control. Tableau Prep tracks each operation so that you can check your work and make changes at any point in the flow.

When you are finished with your flow, run it to apply the operations to the entire data set.

Tableau Prep works seamlessly with other Tableau products. At any point in your flow, you can create an extract of your data, publish your data source to Tableau Server or Tableau Online, publish your flow to Tableau Server or Tableau Online to continue editing on the web or refresh your data using a schedule. You can also open Tableau Desktop directly from within Tableau Prep Builder to preview your data.

Steps taken to clean dataset through Tableau Prep Builder

Step 1:

- Firstly, connect dataset to tableau prep and uncheck the inactive flag column. This will remove inactive flag column from dataset because this column contains almost missing data.

top_chess_players_aug_2020 10 fields | Filter Values...

Clear the check box to remove fields. You can also filter your data or change data types. [Add a clean step](#) to view and clean data.

Fields selected: 9 of 10

<input type="checkbox"/>	Type	Field Name	Original Field Name	Changes	Preview
<input checked="" type="checkbox"/>	#	Fide id	Fide id		15,03,014, 20,20,009, 41,00,018
<input checked="" type="checkbox"/>	Abc	Name	Name		Carlsen, Magnus, Caruana, Fabiano, Kasparov, Ga...
<input checked="" type="checkbox"/>	Abc	Federation	Federation		NOR, USA, RUS
<input checked="" type="checkbox"/>	Abc	Gender	Gender		M
<input checked="" type="checkbox"/>	#	Year_of_birth	Year_of_birth		1,990, 1,992, 1,963
<input checked="" type="checkbox"/>	Abc	Title	Title		GM
<input checked="" type="checkbox"/>	#	Standard_Rating	Standard_Rating		2,863, 2,835, 2,812
<input checked="" type="checkbox"/>	#	Rapid_rating	Rapid_rating		2,881, 2,773, 2,783
<input checked="" type="checkbox"/>	#	Blitz_rating	Blitz_rating		2,886, 2,711, 2,801
<input type="checkbox"/>	Abc	Inactive_flag	Inactive_flag		null, i

Fig.2.1 Connect Dataset

Step 2:

- Now click on step to Clean. This will show summary of each column like how many columns contain null values.

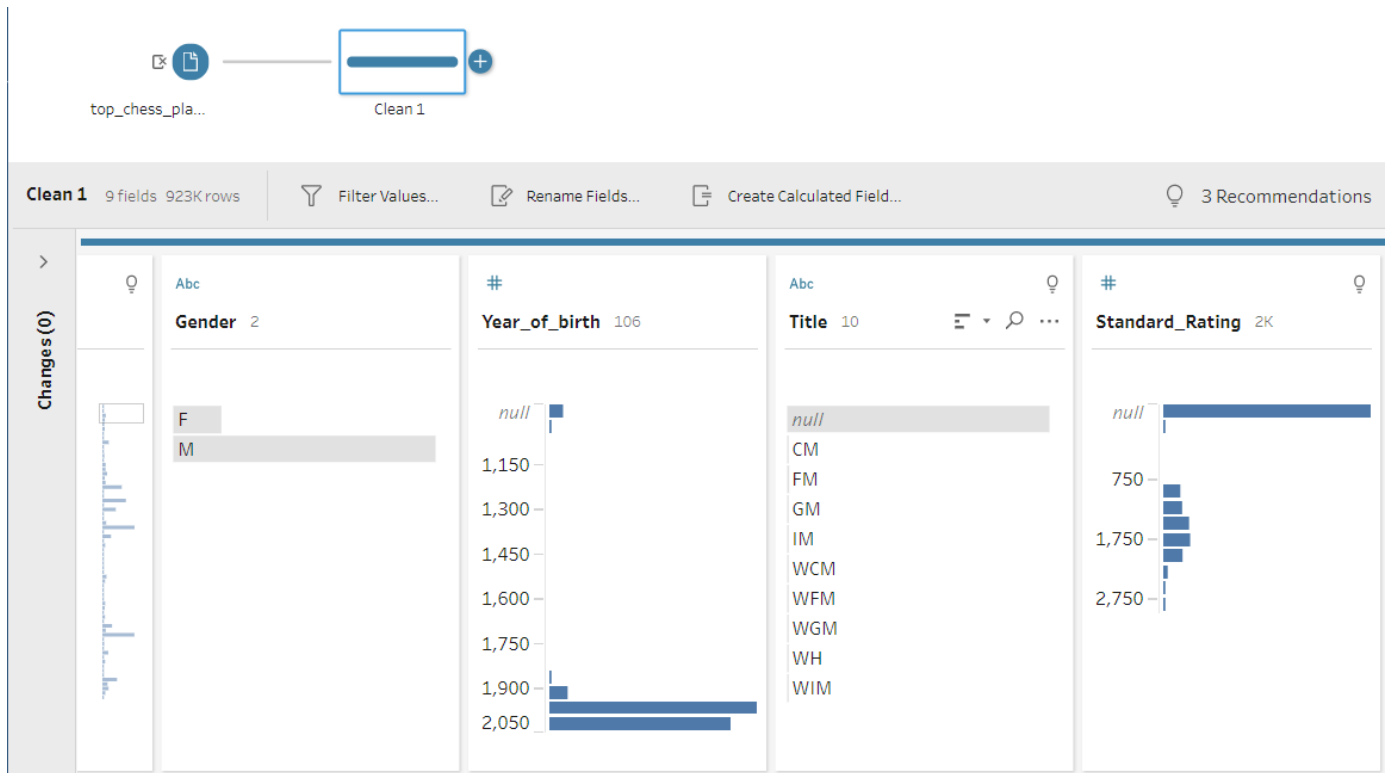


Fig.2.2. Summary of Dataset

Step 3:

- Now, Right Click on null values and select exclude. This will remove the null values from the dataset. After remove you can see the changes.

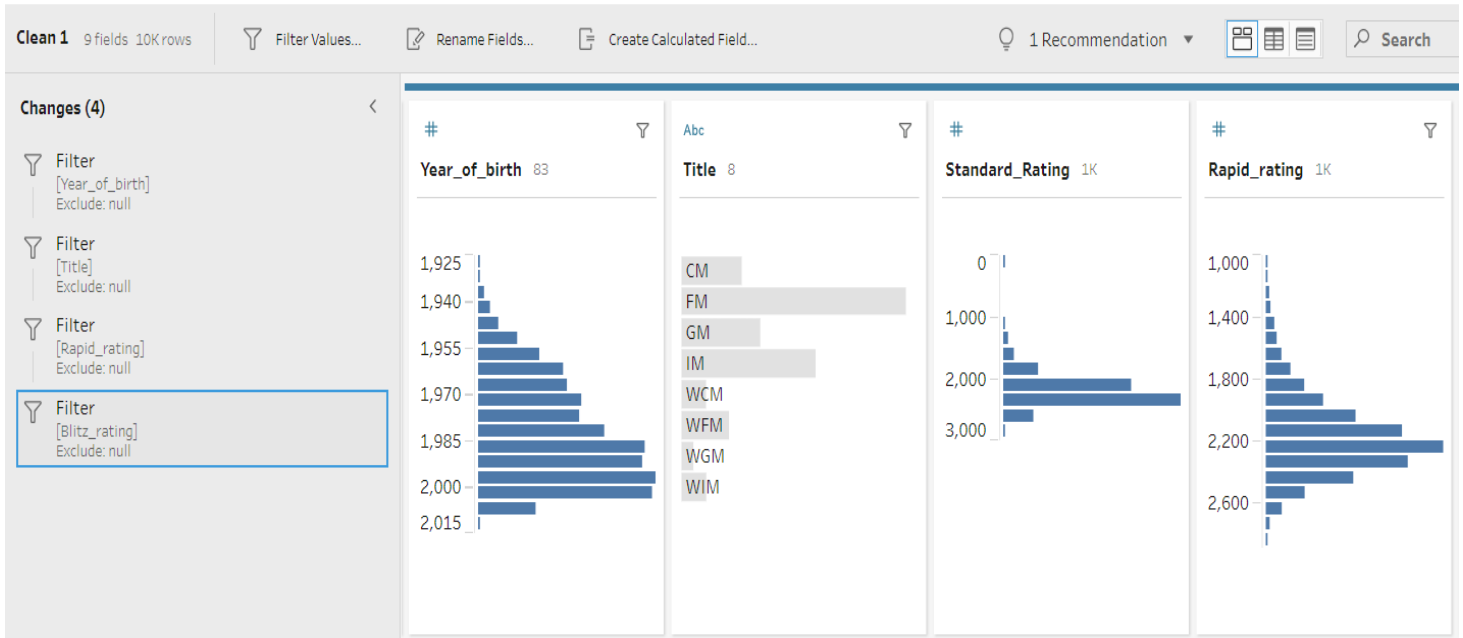


Fig.2.3 Remove Null Values

Step 4:

- Now, for fixing the name column. Click on three dots in name column and select automatic split option from the split option. This will automatically separate from comma “,”. Now, we have first and last name in two different columns.

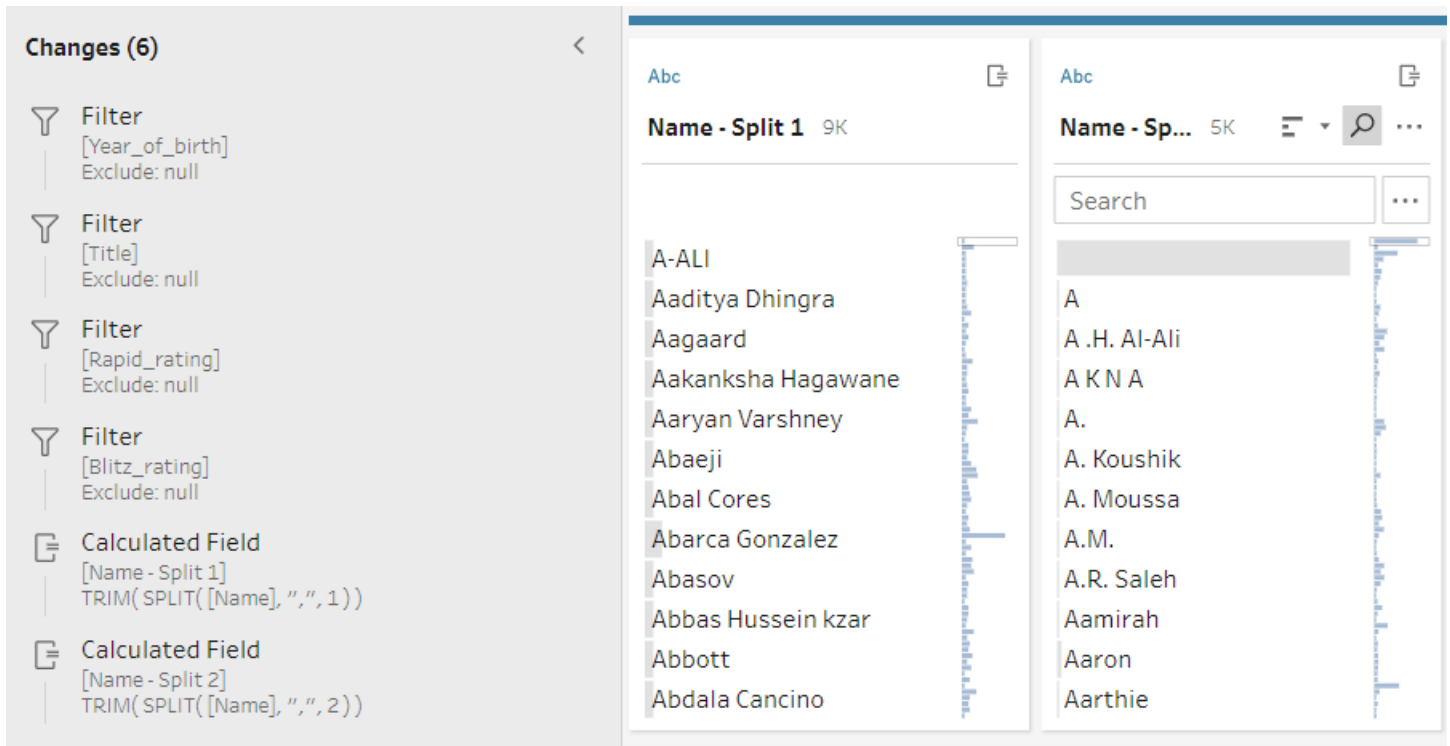


Fig.2.4 Split Name Column

Step 5:

- Now, Merge the both split columns using calculated field option.
- Use formula: - [Name - Split 2]+" "+[Name - Split 1]
- This will create a new calculated field as we required.

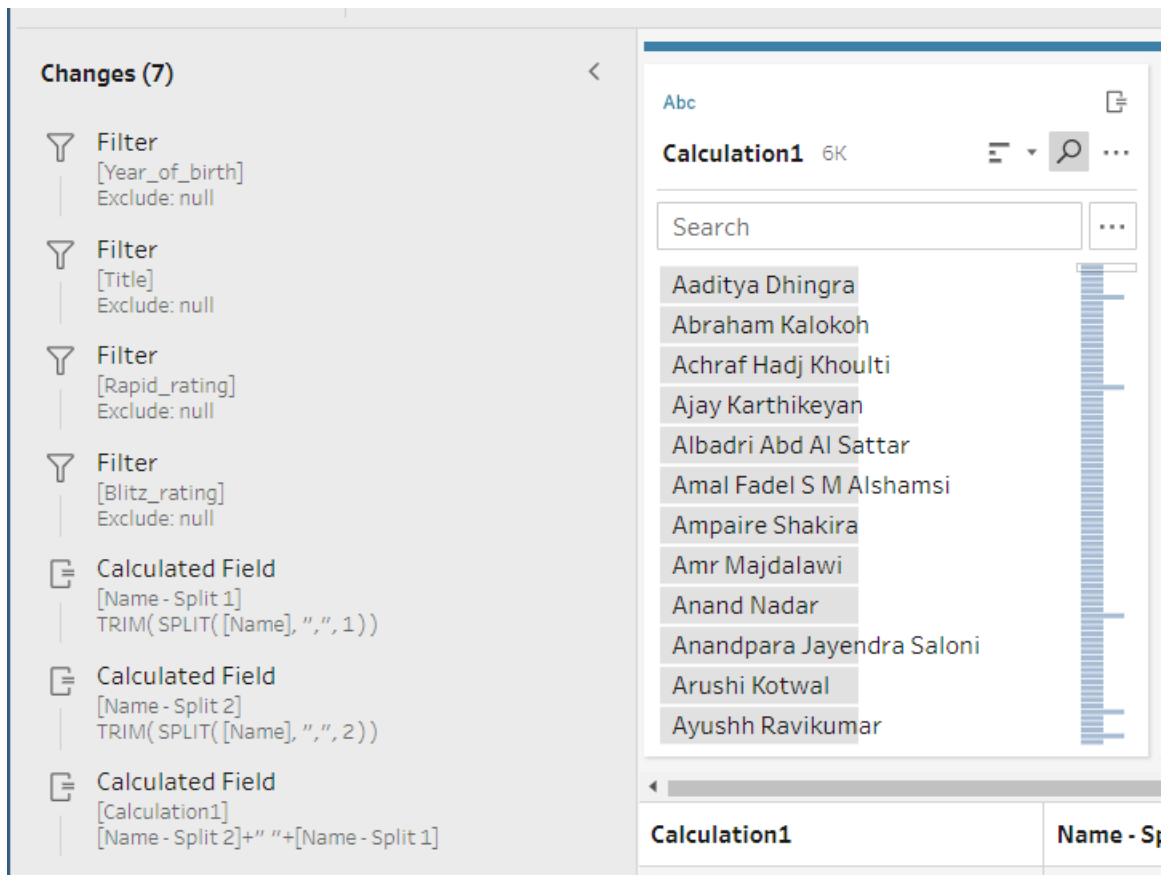


Fig. 2.5 Creating Name column

Step 6:

- Finally, Remove both splitted columns and the original name column also.
- Now, Rename calculation1 as Name

The screenshot displays a data transformation interface. On the left, the 'Changes (11)' pane lists a sequence of operations: three filters on [Title], [Rapid_rating], and [Blitz_rating] (all set to 'Exclude: null'); three calculated fields for splitting and trimming the [Name] field; and three 'Remove Field' actions for [Name - Split 1], [Name - Split 2], and [Name]. The final action, 'Rename Field', is highlighted with a blue border, showing the transformation of [Calculation1] to [Name]. On the right, a data preview table is shown with columns 'Name' and 'Fide id'. The table contains 10 rows of chess player data.

Name	Fide id
Nadezhda Kharmunova	41,95,87
Adriana Pachon	44,00,69
Ravishen Singh	77,00,19
Mikee Charlene Suede	52,08,92
Frantisek Tepper	1,49,00,6
Abraham Kalokoh	
Ajay Karthikeyan	
Amal Fadel S M Alshamsi	
Ampaire Shakira	
Amr Majdalawi	
Anand Nadar	
Anandpara Jayendra Saloni	
Arushi Kotwal	
Ayushh Ravikumar	
Azjargal Erdenebat	
Banda Natalie Katlo	
Bhagat Kush	

Fig.2.6 Removing Unnecessary Fields

Step 7:

- Finally, generate new output field as we required and run the flow to make the changes save in new file.

The screenshot displays the Tableau Data Prep interface. At the top, a flow diagram shows three steps: 'top_chess_pla...', 'Clean 1', and 'Output'. The 'Output' step is highlighted with a blue box. Below the flow, the 'Output' configuration panel is open, showing '9 fields'. The 'Save output to' section is set to 'File', with a 'Browse' button. The 'Name' field is 'Output'. The 'Location' is 'C:\...\Datasources'. The 'Output type' is 'Tableau Data Extract (.hyper)'. The 'Write Options' section is set to 'Full refresh' and 'Create table'. A 'Run Flow' button is at the bottom. The 'Save to Output.hyper' table is visible, containing chess player data.

Name	Fide id	Federation	Gender	Year_of_birth	Title	Standard_Rating	Rapid_rating	Blitz_rating
Nadezhda Kharmunova	41,95,876	RUS	F	1,989	WIM	2,011	2,124	2,081
Adriana Pachon	44,00,690	COL	F	1,996	WFM	2,011	2,048	2,046
Ravishen Singh	77,00,199	TTO	M	1,977	CM	2,011	2,128	2,191
Mikee Charlene Suede	52,08,920	PHI	F	1,994	WIM	2,011	2,048	2,091
Frantisek Tepper	1,49,00,610	SVK	M	1,947	FM	2,011	2,024	2,007
Juan Sebastian Toro Henao	44,14,705	COL	M	1,995	CM	2,011	1,920	1,956
Thomas Xuan	32,20,478	AUS	M	1,997	CM	2,011	2,062	2,073
Kanwal K Bhatia	4,07,496	ENG	F	1,981	WFM	2,010	2,009	1,928
Daniela Cordero	33,01,630	BOL	F	1,992	WIM	2,010	1,981	1,895
Milena Czerwinska	11,19,044	POL	F	1,985	WFM	2,010	1,840	1,803
Nona Datuashvili	1,36,02,390	GEO	F	1,986	WIM	2,010	2,105	1,976
Enrique Ric Garcia Herrera	51,15,124	MEX	M	2,000	CM	2,010	1,837	1,864
Igor Leshchysak	1,35,03,316	BLR	M	1,974	FM	2,010	1,958	1,963
S.wahabuddin Mirzaad	1,17,00,785	AFG	M	1,987	FM	2,010	2,054	1,801
Nazanin Mobarhani	1,25,21,116	IRI	F	1,989	WCM	2,010	1,707	1,687
Rasa Norinkeviciute	1,28,01,925	LTU	F	1,967	WFM	2,010	1,885	1,861
Peter Carroll	25,10,243	IRL	M	2,002	CM	2,009	1,753	1,913
Daniel Eduardo Lopez Idarraga	44,05,501	COL	M	1,989	FM	2,009	2,067	2,124

Fig.2.7 Saving Changes

Finally, after cleaning the data, the final dataset sample is shown below:

1	Fide id	Name	Federation	Gender	Year_of_birth	Title	Standard_Rating	Rapid_rating	Blitz_rating
2	4195876	Nadezhda Kharmunova	RUS	F	1989	WIM	2011	2124	2081
3	4400690	Adriana Pachon	COL	F	1996	WFM	2011	2048	2046
4	7700199	Ravishen Singh	TTO	M	1977	CM	2011	2128	2191
5	5208920	Mikee Charlene Suede	PHI	F	1994	WIM	2011	2048	2091
6	14900610	Frantisek Tepper	SVK	M	1947	FM	2011	2024	2007
7	4414705	Juan Sebastian Toro Henao	COL	M	1995	CM	2011	1920	1956
8	3220478	Thomas Xuan	AUS	M	1997	CM	2011	2062	2073
9	407496	Kanwal K Bhatia	ENG	F	1981	WFM	2010	2009	1928
10	3301630	Daniela Cordero	BOL	F	1992	WIM	2010	1981	1895
11	1119044	Milena Czerwinska	POL	F	1985	WFM	2010	1840	1803
12	13602390	Nona Datuashvili	GEO	F	1986	WIM	2010	2105	1976
13	5115124	Enrique Ric Garcia Herrera	MEX	M	2000	CM	2010	1837	1864
14	13503316	Igor Leshchysak	BLR	M	1974	FM	2010	1958	1963
15	11700785	S.wahabuddin Mirzaad	AFG	M	1987	FM	2010	2054	1801
16	12521116	Nazanin Mobarhani	IRI	F	1989	WCM	2010	1707	1687
17	12801925	Rasa Norinkeviciute	LTU	F	1967	WFM	2010	1885	1861
18	2510243	Peter Carroll	IRL	M	2002	CM	2009	1753	1913
19	4405501	Daniel Eduardo Lopez Idarraga	COL	M	1989	FM	2009	2067	2124
20	14408902	Masa Maksimovic	BIH	F	2001	WFM	2009	2031	1922
21	7902484	Nouressadat Salhi	ALG	M	1975	CM	2009	1921	1902
22	136956	Leandro Santillan	ARG	M	1998	CM	2009	2155	1989
23	2302454	Hallgerdur Thorsteinsdottir	ISL	F	1992	WFM	2009	1865	1928
24	1208624	Olimpiu Urcan	SGP	M	1977	CM	2009	1964	2114
25	4417461	Jose Robinson Vargas	COL	M	1985	CM	2009	2052	1978
26	14105560	Olena Zemlickova	CZE	F	1985	WIM	2009	2122	2102
27	24142034	Ekaterina Abramova	RUS	F	1987	WFM	2008	1931	1937
28	1902970	Ana Filipa Baptista	POR	F	1990	WFM	2008	2069	2048

Fig.2.8. Cleaned Dataset

Analysis on dataset

1. Top Female Players according to standard rating

Introduction

- By performing this analysis, we will get top 10 female player from highest to lowest standard rating.

Description

- The analysis is based on name, gender and standard rating.

Specific requirements, functions and formulas

- Pivot table is used for the analysis.
- Max or Min function is used in pivot table for the Standard Rating in the pivot table
- In Filter Gender column is used in the pivot table

Analysis results

Gender	F
Name	Standard_Rating
Judit Polgar	2675
Yifan Hou	2658
Humpy Koneru	2586
Aleksandra Goryachkina	2582
Wenjun Ju	2560
Kateryna Lagno	2546
Mariya Muzychuk	2544
Viktorija Cmilyte	2538
Anna Muzychuk	2535
Nana Dzagnidze	2524

Table. 1.1 Top Female Players in Standard Game

Visualization

- When female is selected from filter

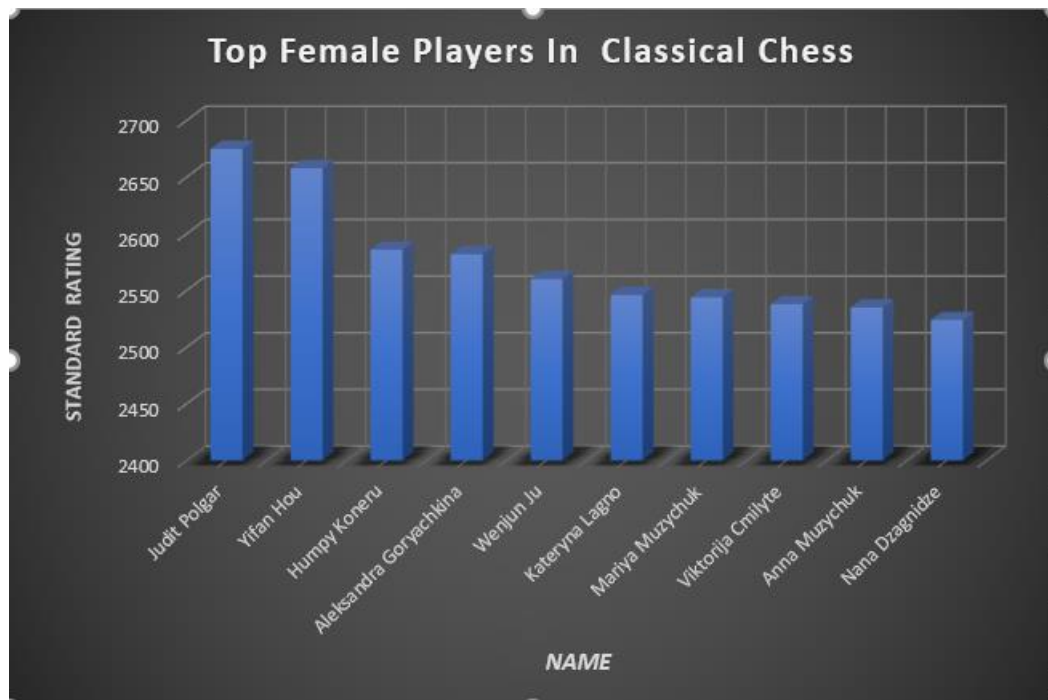


Fig.3.1 Top Female Players In Standard Game Chart

- When male is selected from filter option

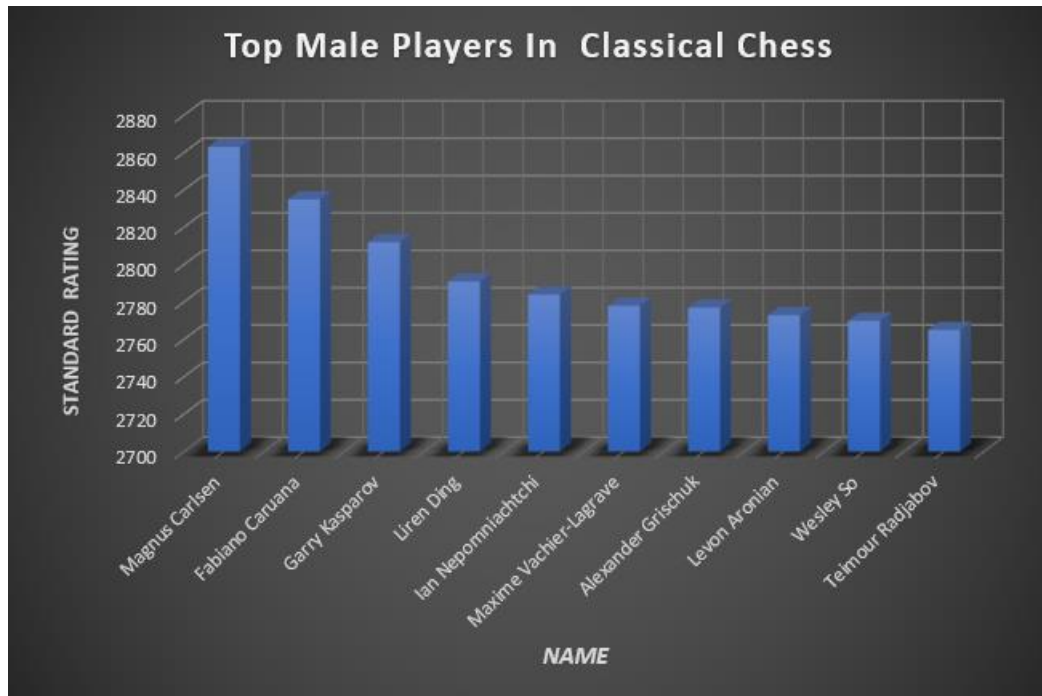


Fig.3.2 Top Male Player in Standard Game Chart

2. Top Male Players who are born after 1990 in Blitz game

Introduction

- By performing this analysis, we will get the male players who are born after 1990 in blitz game

Description

- The analysis based on the name, gender, blitz rating, year of birth of the dataset

Specific requirements, functions and formulas

- Pivot table is used for the analysis.
- Min function is used in pivot table for the Blitz rating in the pivot table
- In filter year of birth and gender column is used

Analysis results

Name	Blitz_rating
Wesley So	2816
Yangyi Yu	2808
Jan-Krzysztof Duda	2799
Liren Ding	2788
Vladislav Artemiev	2783
Alireza Firouzja	2770
Maxim Matlakov	2760
Richard Rapport	2759
Vladimir Fedoseev	2756
Anish Giri	2752

Table 1.2 Top Male in Blitz who born after 1990

Visualization

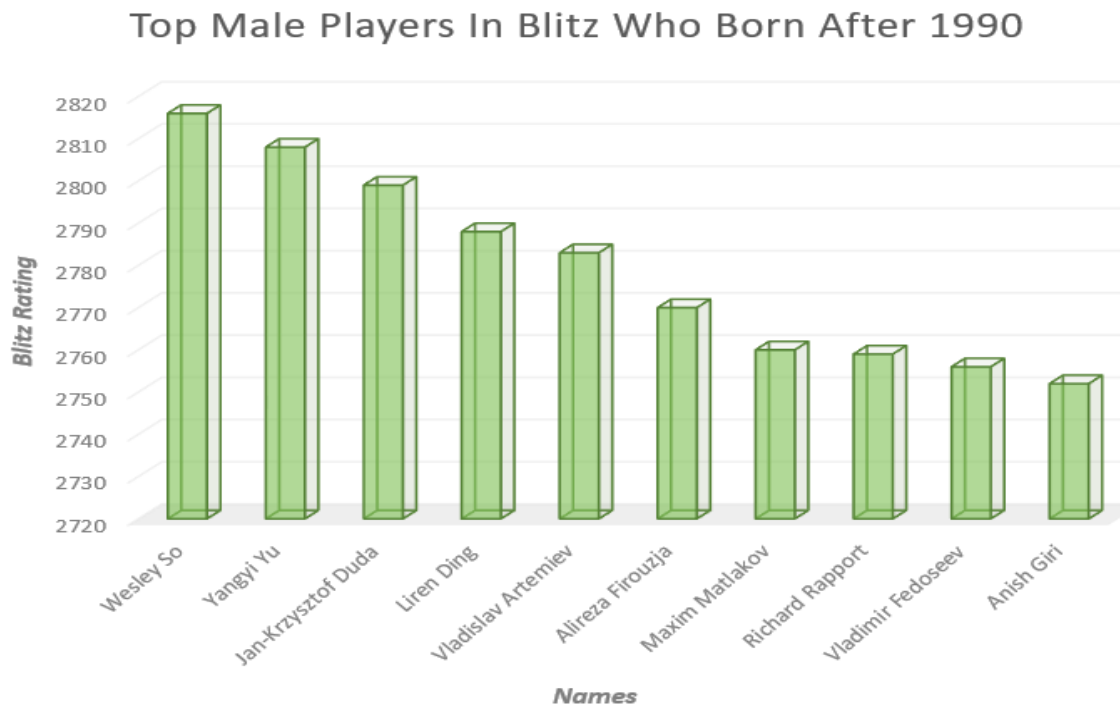


Fig 3.3 Top Male in Blitz Game

3. Top Grand Masters from Russia Federation

Introduction

- By performing this analysis, we will get the top grand masters from Russia

Description

- The analysis based on the title, name, standard rating and federation

Specific requirements, functions and formulas

- Pivot table is used for the analysis.
- Standard Rating is used in columns and name is used in rows of the dataset
- In filter federation and title is used.

Analysis results

Name	Standard Rating
Garry Kasparov	2812
Ian Nepomniachtchi	2784
Alexander Grischuk	2777
Vladimir Kramnik	2753
Sergey Karjakin	2752
Dmitry Andreikin	2726
Peter Svidler	2723
Nikita Vitiugov	2722
Vladislav Artemiev	2716
Evgeny Tomashevsky	2706

Table 1.3 Top GM from Russia

Visualization

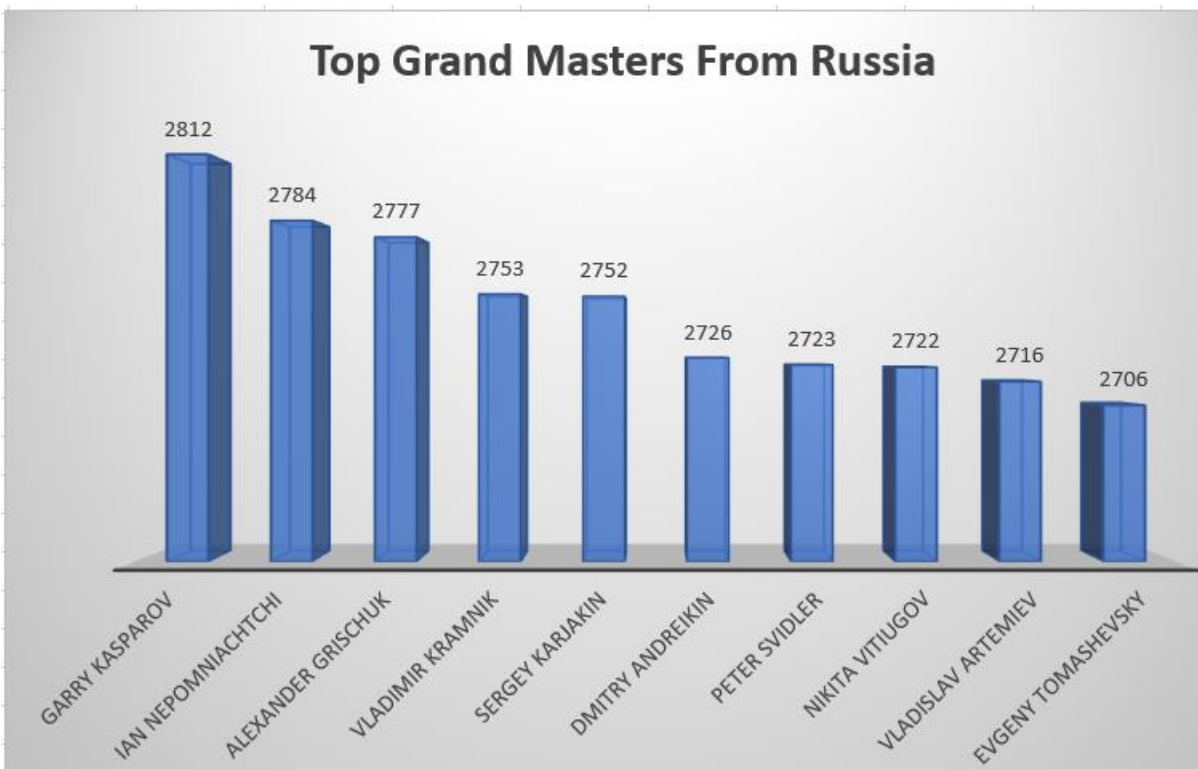


Fig. 3.4 Top GM from Russia

4. Top International Masters federations in Classical Game

Introduction

- By performing this analysis, we will get top federations in classical game of having IM title

Description

- The analysis is based on title, standard rating and federation of the dataset
- Filter is used to show the title

Specific requirements, functions and formulas

- Pivot table is used for the analysis.
- Average standard rating function is used in pivot table for name of the title

Analysis results

Title	IM
Row Labels	Average of Standard_Rating
TPE	2485
CPV	2458
AND	2452
FIN	2449
YEM	2435
CHN	2433
WLS	2428
NED	2421
ARU	2416
ALB	2415

Table 1.4 Top Federations Internation Masters

Visualization



Fig 4.1 Top IM Federation

5. Top Players having more standard rating than both of Blitz and Rapid rating

Introduction

- By performing this analysis, we will get top players whose standard rating is greater than rapid and blitz rating from the dataset

Description

- The analysis is based on standard rating, blitz rating and rapid rating of the dataset.

Specific requirements, functions and formulas

- Nested if else formula is used to get the output
- Formula: - `IF(B7>C7, IF(B7>D7, Cleaned_Chess_Dataset!B6117,0),0)`
- Filter is used to get the top 10 values and arranging

Analysis results

Name	Standard_Rating	Rapid_rating	Blitz_rating
Fabiano Caruana	2835	2773	2711
Garry Kasparov	2812	2783	2801
Teimour Radjabov	2765	2758	2757
Shakhriyar Mamedyarov	2764	2761	2716
Anish Giri	2764	2731	2752
Hao Wang	2763	2750	2712
Richard Rapport	2760	2727	2759
Veselin Topalov	2735	2707	2667
Pentala Harikrishna	2732	2705	2614
Nikita Vitiugov	2722	2616	2673

Table 1.5 Top Player having Greater Standard Rating

Visualization

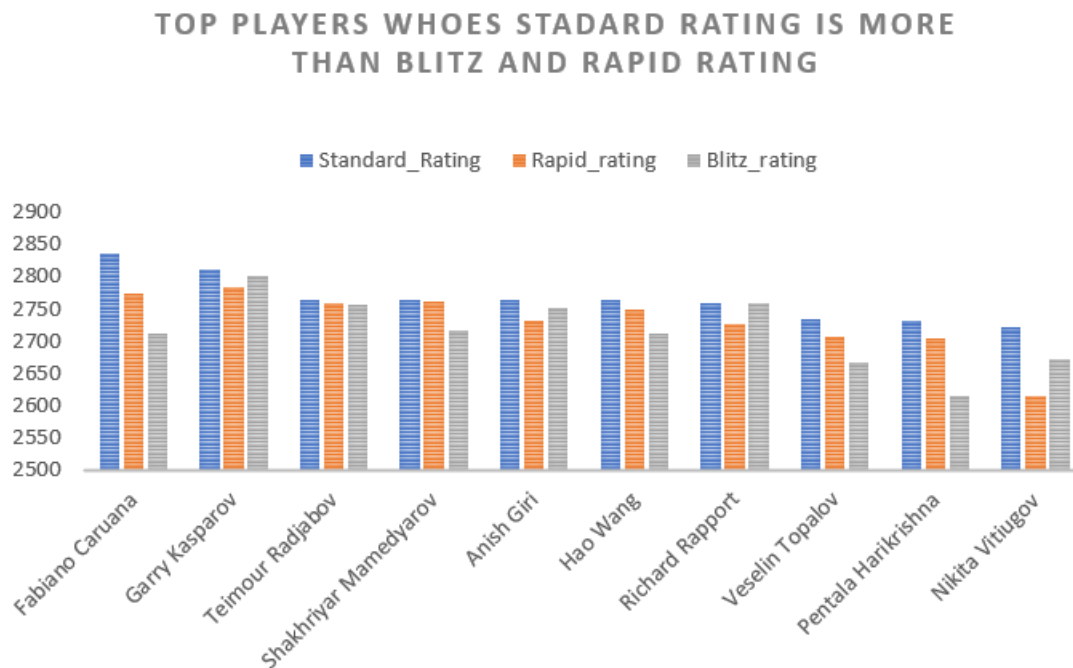


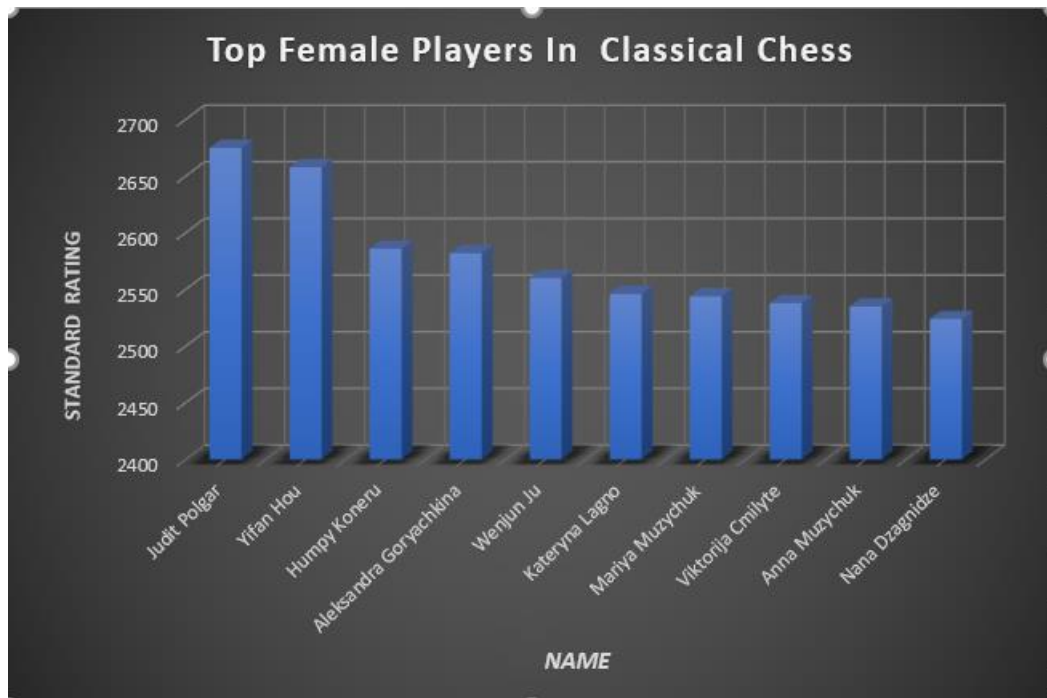
Fig 4.2 Top Players In standard rating

List of Analysis with results

1. Top Female Players according to standard rating

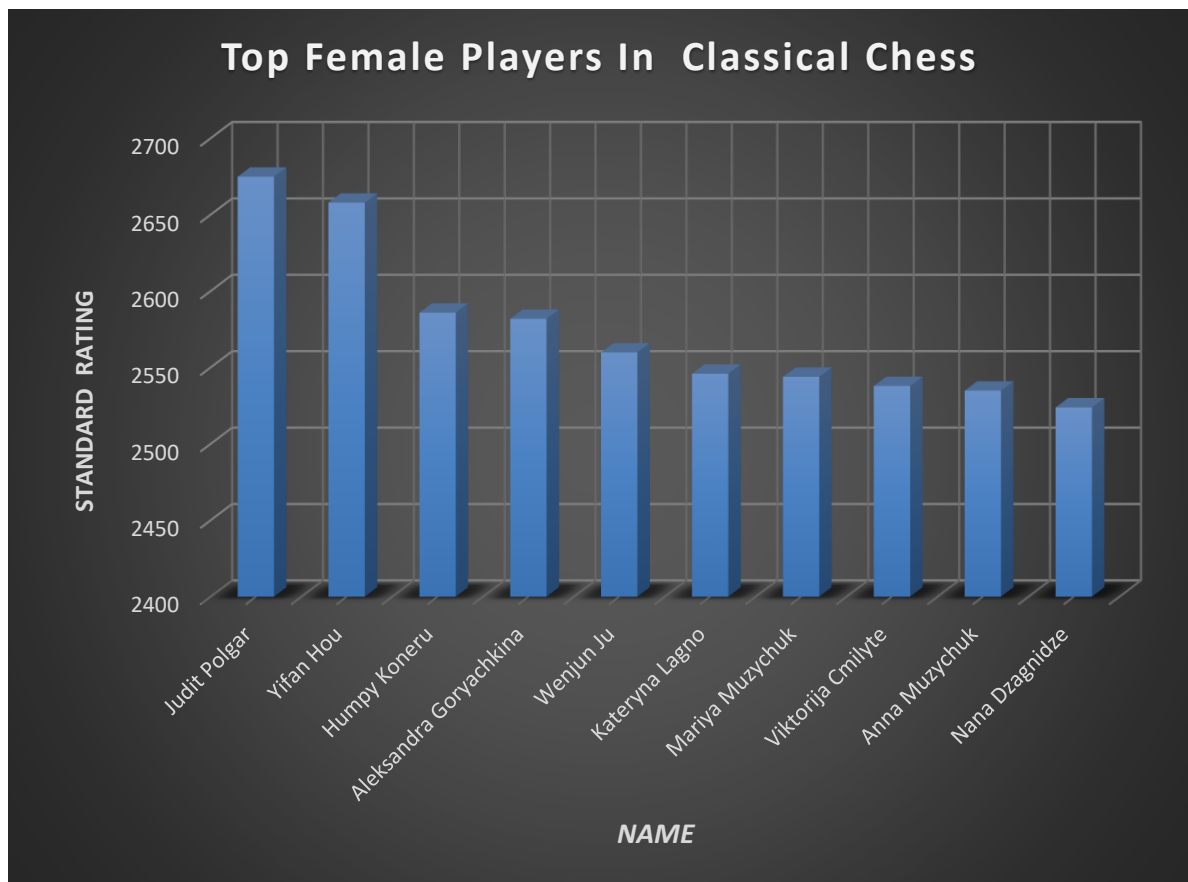
➤ Top 10 Female Players:

- 1) Judit Polgar
- 2) Yifan Hou
- 3) Humpy Koneru
- 4) Aleksandra Goryachkina
- 5) Wenjun Ju
- 6) Kateryna Lagno
- 7) Mariya Muzychuk
- 8) Viktorija Cmilyte
- 9) Anna Muzychuk
- 10) Nana Dzagnidze



➤ **Top 10 male Players:**

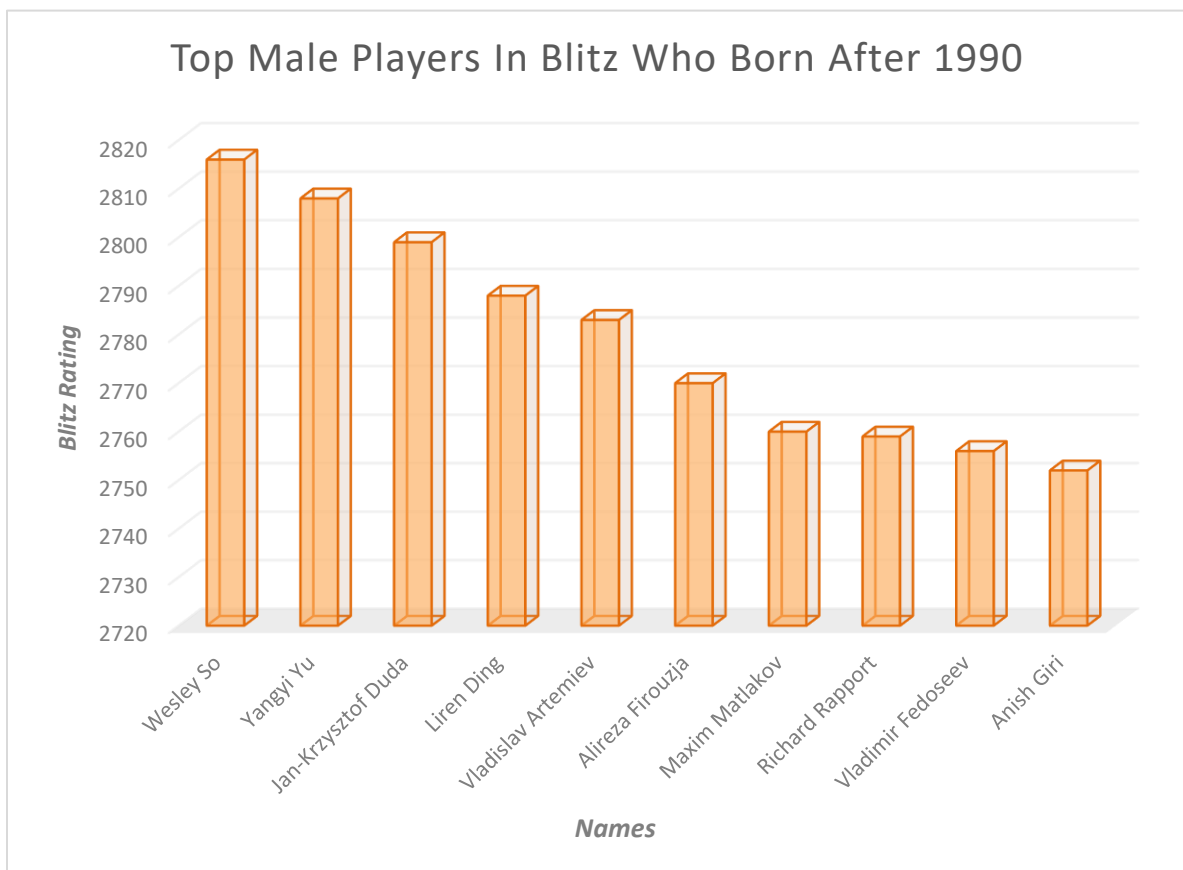
- 1)** Magnus Carlsen
- 2)** Fabiano Caruana
- 3)** Garry Kasparov
- 4)** Liren Ding
- 5)** Ian Nepomniachtchi
- 6)** Maxime Vachier-Lagrave
- 7)** Alexander Grischuk
- 8)** Levon Aronian
- 9)** Wesley So
- 10)** Teimour Radjabov



2. Top Male Players who are born after 1990 in Blitz game

➤ Top 10 male Players:

- 1) Wesley So
- 2) Yangyi Yu
- 3) Jan-Krzysztof Duda
- 4) Liren Ding
- 5) Vladislav Artemiev
- 6) Alireza Firouzja
- 7) Maxim Matlakov
- 8) Richard Rapport
- 9) Vladimir Fedoseev
- 10) Anish Giri



3. Top Grand Masters from Russia Federation

➤ **Top 10 Players from Russia:**

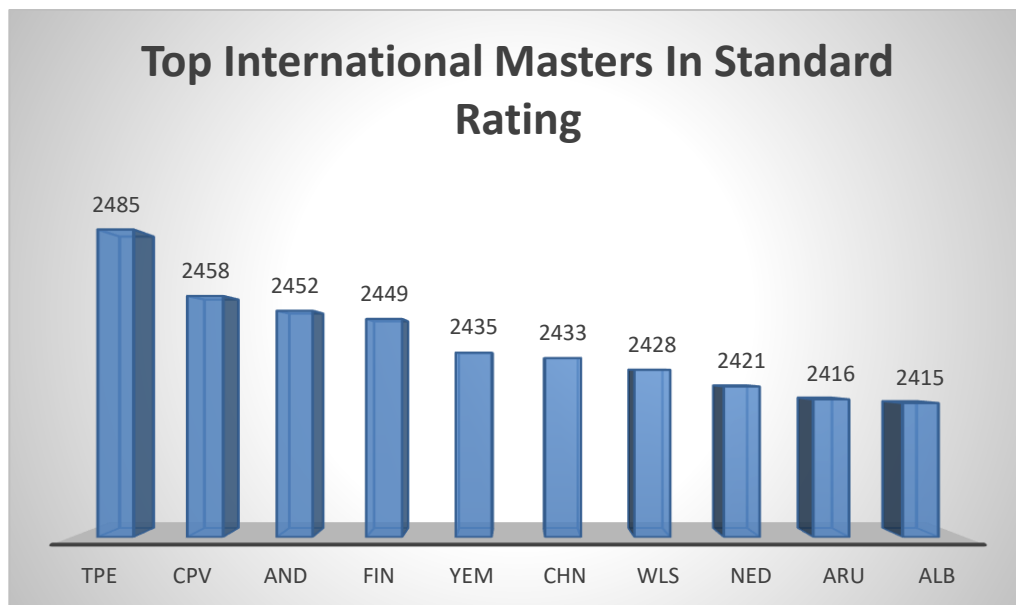
- 1) Garry Kasparov
- 2) Ian Nepomniachtchi
- 3) Alexander Grischuk
- 4) Vladimir Kramnik
- 5) Sergey Karjakin
- 6) Dmitry Andreikin
- 7) Peter Svidler
- 8) Nikita Vitiugov
- 9) Vladislav Artemiev
- 10) Evgeny Tomashevsky



4. Top International Masters federations in Classical Game

➤ Top 10 IM federations :

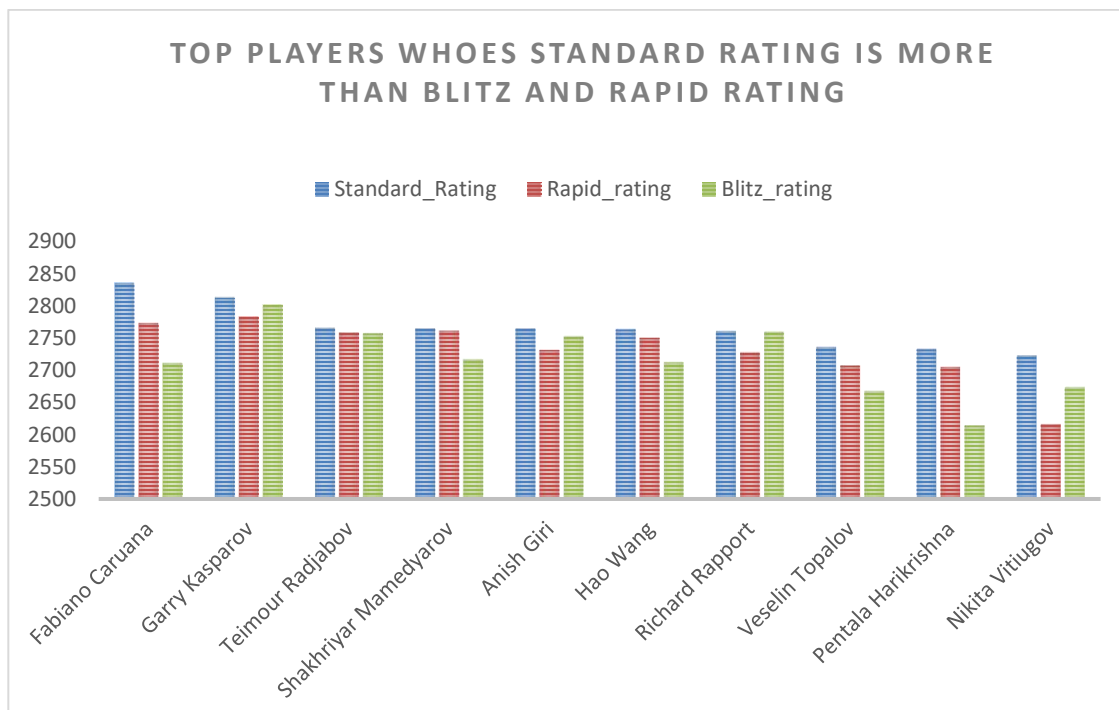
- 1) TPE
- 2) CPV
- 3) AND
- 4) FIN
- 5) YEM
- 6) CHN
- 7) WLS
- 8) NED
- 9) ARU
- 10) ALB



5. Top Players whose standard rating is more than blitz and rapid rating

➤ The top 10 players:

- 1) Fabiano Caruana
- 2) Garry Kasparov
- 3) Teimour Radjabov
- 4) Shakhriyar Mamedyarov
- 5) Anish Giri
- 6) Hao Wang
- 7) Richard Rapport
- 8) Veselin Topalov
- 9) Pentala Harikrishna
- 10) Nikita Vitiugov



FINAL DASHBOARD



BIBLIOGRAPHY

- Dataset source:

<https://www.kaggle.com/vikasojha98/world-top-chess-players-august-2020>

- Dashboard Background Image:

<https://wallpaperaccess.com/black-king-chess-piece>

- Information about Data Management:

<https://www.blue-pencil.ca/what-is-data-management-and-why-it-is-important/>