Project: LPL team data analysis

Introductions

- League of legends (lol) is a popular computer game developed by Riot company. Most of the players view this game as an entertainment while some professional players rely on it as a job. These professional players form teams and compete with each other for award money and reputation. League of Legends Pro League (LPL) is the highest-level competition in mainland China. Here in this project, I scraped some LPL game data and did some statistical analysis about the teams in LPL. Those who are interested in this game or fans of these teams maybe interested in this project

- This projects aims to answer the following questions:

- Will the win rate be affected by choosing blue side or red side of the game?
- What is the team features of EDG, WE, RNG and IG (most polular teams in Chinese LOL)
- What is the ranking of different teams

Data description and Methodology

- The data are all scraped down from a website (https://www.wanplus.com). The website stores the historical game information of lol for many years. In the project, only the historical game data in 2019 will be selected for analysis. Both team data and player data will be considered.

- There are two main components of the methodology part: data scraping and data visualization

- Data scraping: team data is scraped from https://www.wanplus.com and the cleaned to keep only the data we cares about. The data is scraped from the website and then extracted and saved in a local path.
- Data visualization: a recently popular visualization api pyecharts is used to plot bars, pies or radars.

Scraped Data

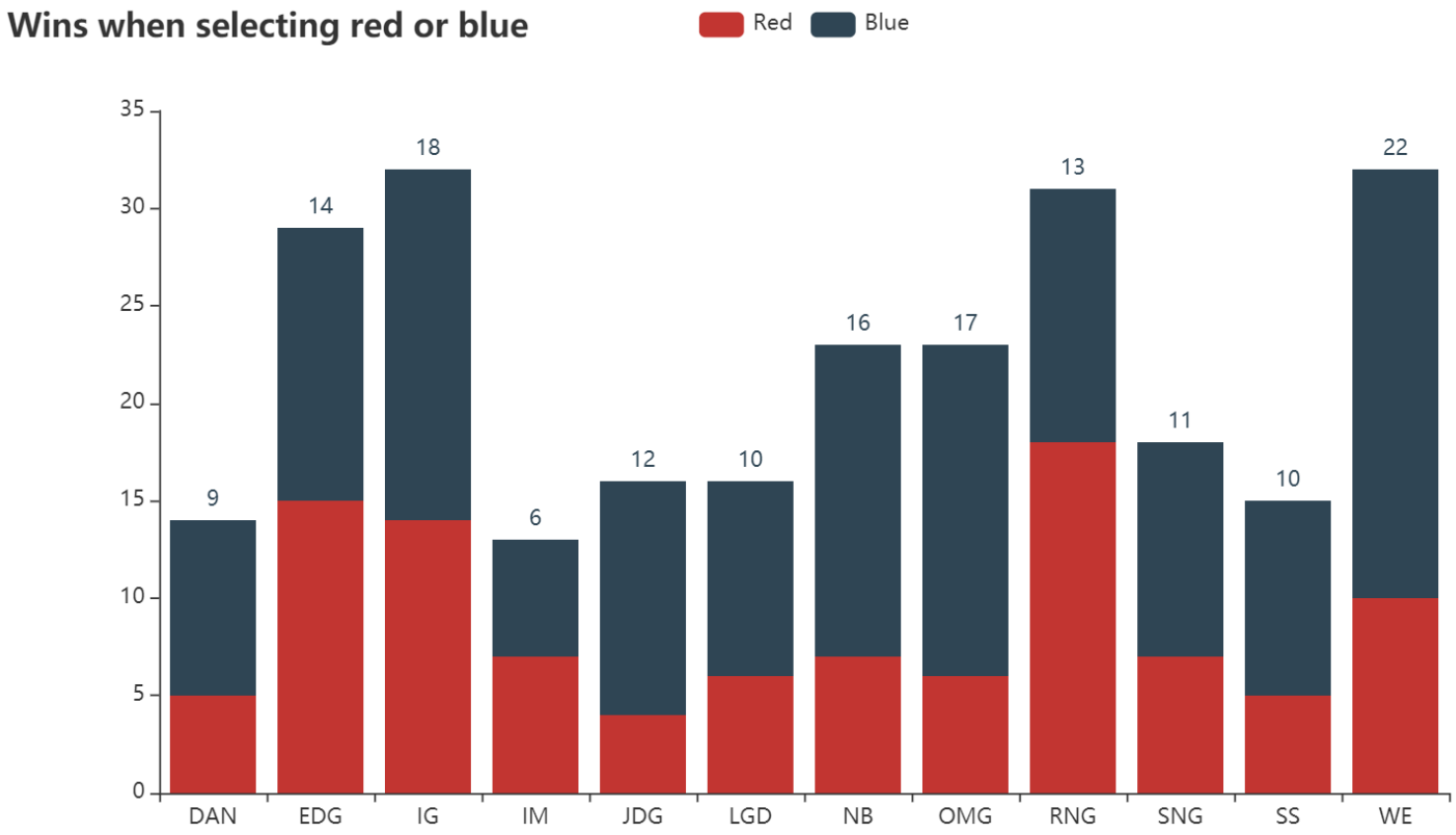
	名次	战队	KDA	场均击杀	场均死亡	每分钟伤害	一血率	场均时长	场均经济	每分钟经济	每分钟补刀	场均小龙	小龙控制率	场均大龙	大龙控制率	每分钟插眼	每分钟排眼	排眼效率	场均推塔数	场均被推塔数
0	1	OMG	2.0	10.2	16.6	1656	52.9%	32:31	55131	1695	31.65	1.4	34.1%	0.4	34.1%	3.13	1.38	41.4%	3.7	7.7
1	2	EDG	4.2	13.6	10.9	1815	72.7%	31:45	57752	1818	31.70	2.5	57.7%	0.7	52.6%	3.57	1.76	51.2%	6.5	5.0
2	3	IG	2.9	15.0	16.0	2155	38.6%	29:58	55157	1839	32.11	1.6	44.1%	0.6	48.2%	3.04	1.34	41.4%	5.5	5.8
3	4	LGD	2.4	10.8	15.4	1698	51.4%	33:18	56043	1682	30.88	2.3	53.1%	0.3	22.2%	3.34	1.44	43.4%	4.2	7.9
4	5	LNG	3.5	14.1	13.1	1805	34.9%	34:36	62999	1820	32.61	2.4	53.6%	0.9	62.5%	3.58	1.76	48.7%	6.6	6.1

	名次	选手	战队	位置	出场次数	KDA	参团率	场均击杀	单场最高击杀	场均死亡	...	场均助攻	单场最高助攻	GPM	CSPM	每分钟输出	输出占比	每分钟承受伤害	承受伤害占比	每分钟插眼数	每分钟排眼数
0	1	KRYST4L	OMG	ADC	12	2.3	62.2%	2.5	7	3.2	...	4.9	10	402	8.74	424	25.7%	368	13.0%	0.48	0.45
1	2	cold	OMG	辅助	11	1.8	67.4%	0.5	3	3.0	...	4.9	11	237	1.52	129	7.8%	413	14.7%	1.63	0.30
2	3	World6	OMG	打野	20	1.9	72.2%	1.8	7	3.6	...	5.2	19	295	4.28	208	12.6%	751	25.0%	0.36	0.36
3	4	icon	OMG	中单	32	2.3	65.3%	3.0	8	3.0	...	3.9	16	385	8.40	446	26.7%	596	20.6%	0.42	0.17
4	5	Guoguo	OMG	中单	2	0.4	28.6%	0.0	0	2.5	...	1.0	2	318	8.22	289	22.2%	443	16.3%	0.55	0.09

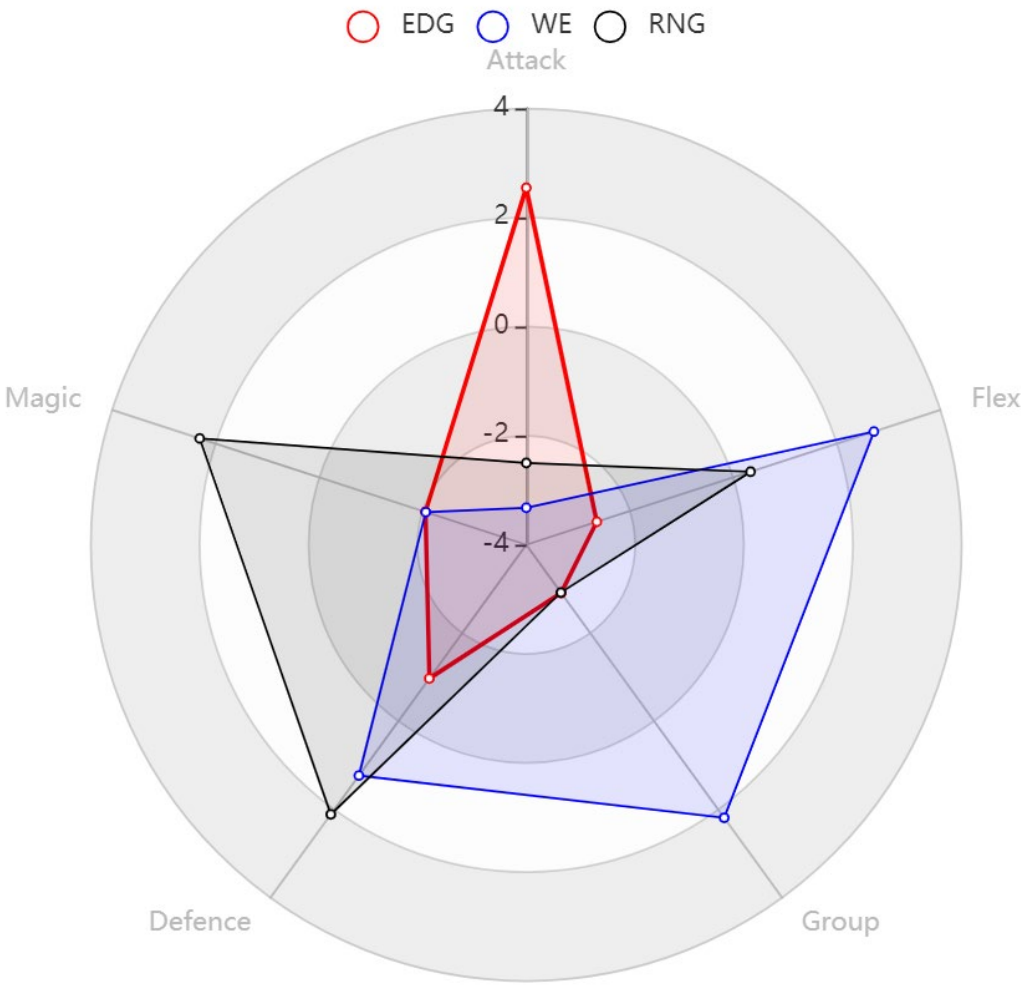
Scraped Data

	Team	Attack	Magic	Defence	Group	Flex	Is_Red	IS_V
0	EDG	46	48	64	86	68	0	0
1	EDG	50	52	62	78	50	0	0
2	EDG	46	64	54	70	62	1	1
3	EDG	54	54	50	74	70	1	1
4	EDG	58	52	60	68	58	0	1

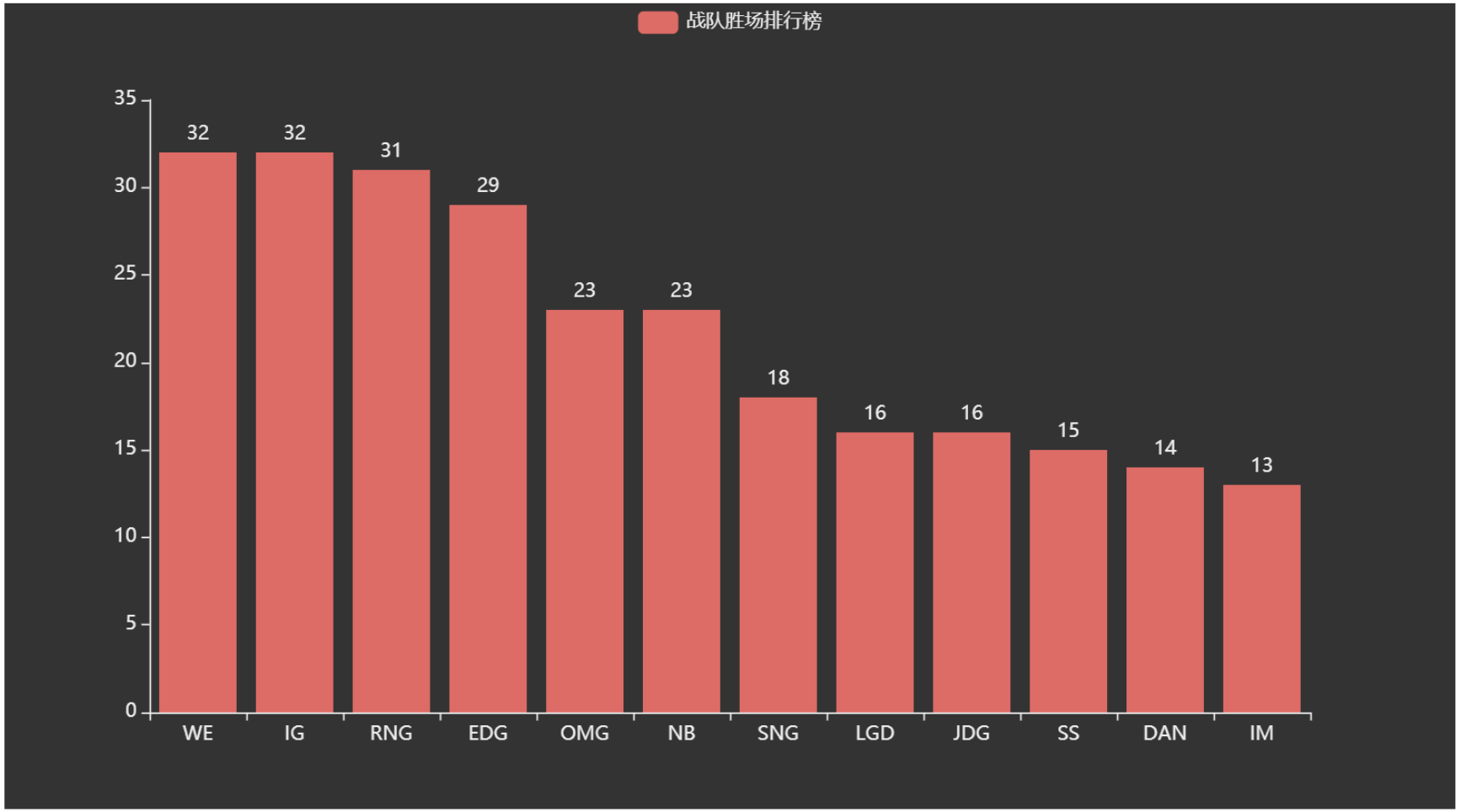
Data visualization: wins when selecting red side or blue side



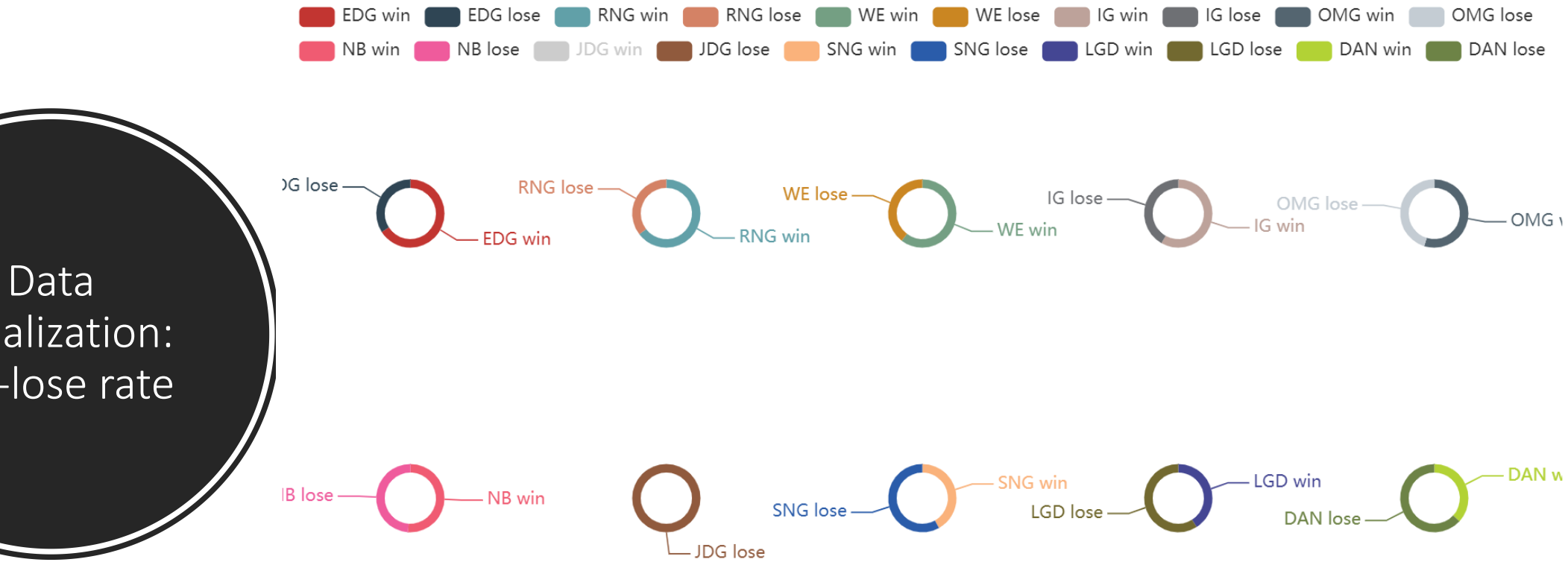
Data visualization: gaming charasteristics



Data visualization: Ranking of the teams



Data visualization: win-lose rate



Discussion and conclusions

- 1. For most of the teams, like JDG, NB, WE and IG, the win rate of choosing blue side is higher then choosing red side. Among all the 12 teams, there are only three exceptions: RNG, EDG and IM.
- 2. The gaming charateristics of three teams: EDG is better in attacking while WE is more willing to defence and group. RNG is quite flexible and very good at magic attack and defence
- 3. The 12 teams can be categoried into three groups: EDG, RNG and WE (win rate above 60%); OMG, IG, NB (wiin rate around 50%); JDG, SNG, LGD and DAN (win rate below 45%)