

Esport Consulting AB

Sieging the competition with data analysis

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A Kevin Björk Production

Outline

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- The game: Rainbow Six Siege

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- Challenges and learnings
- Moving forward

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- Has an active e-sport scene with prize pools in the millions of dollars

Prize Pool

Place	\$ USD	Team
1st	\$800,000	G2 Esports
2nd	\$320,000	Team Empire
3rd-4th	\$160,000	PET Nora-Rengo
		Team Reciprocity

Prize Pool



Place

\$ USD

Team

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\$800,000

G2 Esports

2nd

\$320,000

Team Empire

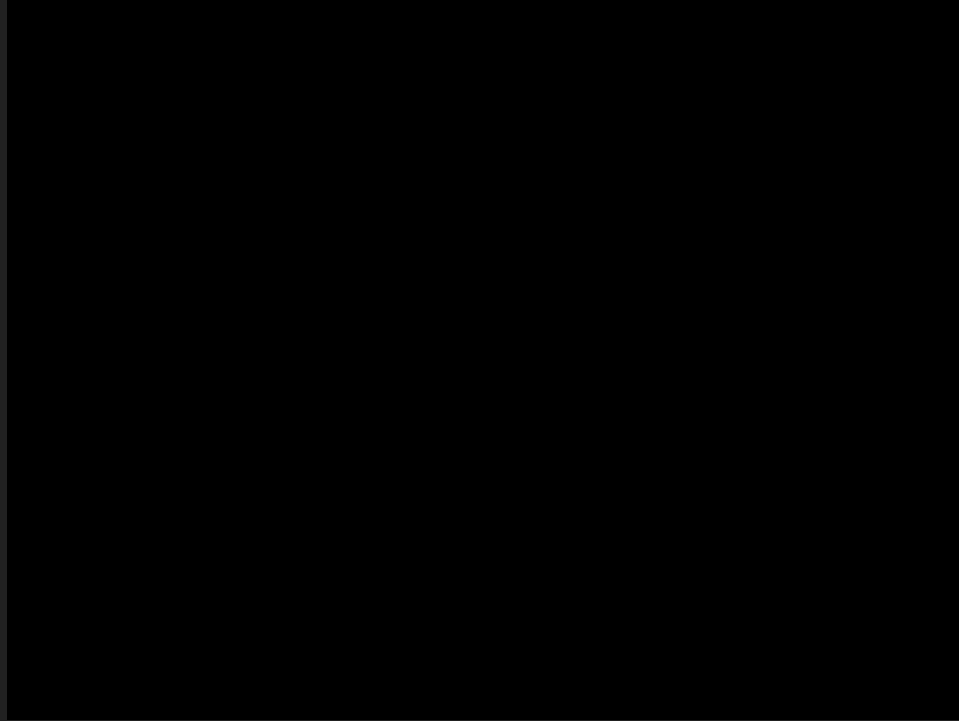
3rd-4th

\$160,000

PET Nora-Rengo

Team Reciprocity

Gameplay differences between CS and R6



Main Goal:

Make the best R6 operator composition possible

The Data

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 - Operator used, round win/loss, map, objective type, #kills etc.

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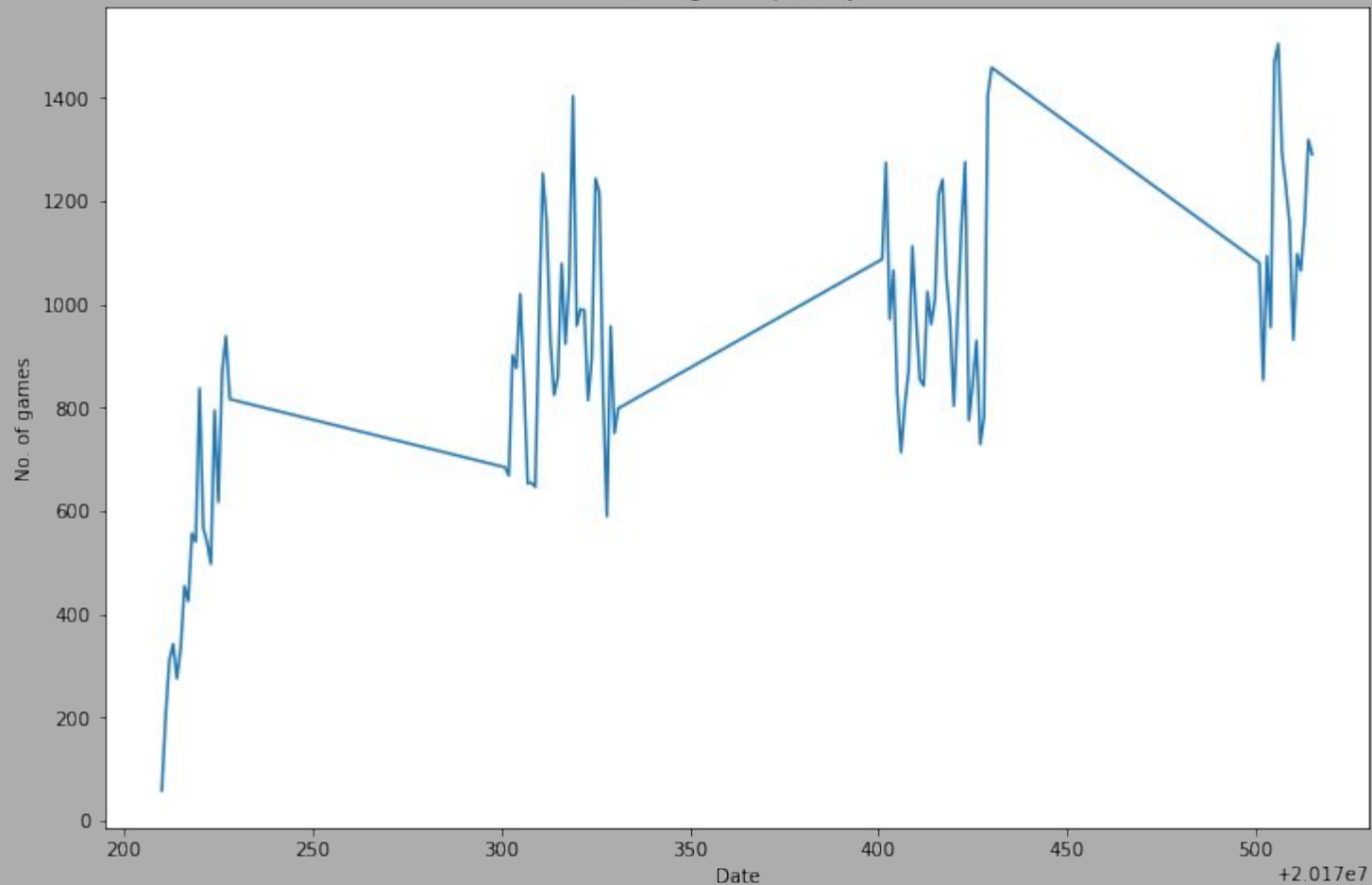
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 - Python cannot allocate enough memory to process this amount
- Reduced data contains 85973 rows and 19 columns
 - Only consider PC as platform
 - Only consider highest ranked players
 - Drop unnecessary columns

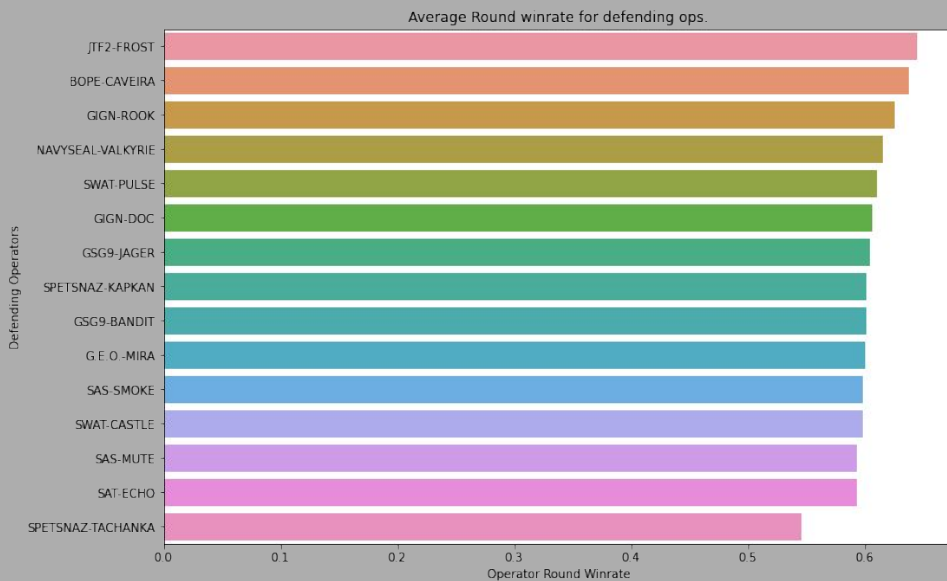
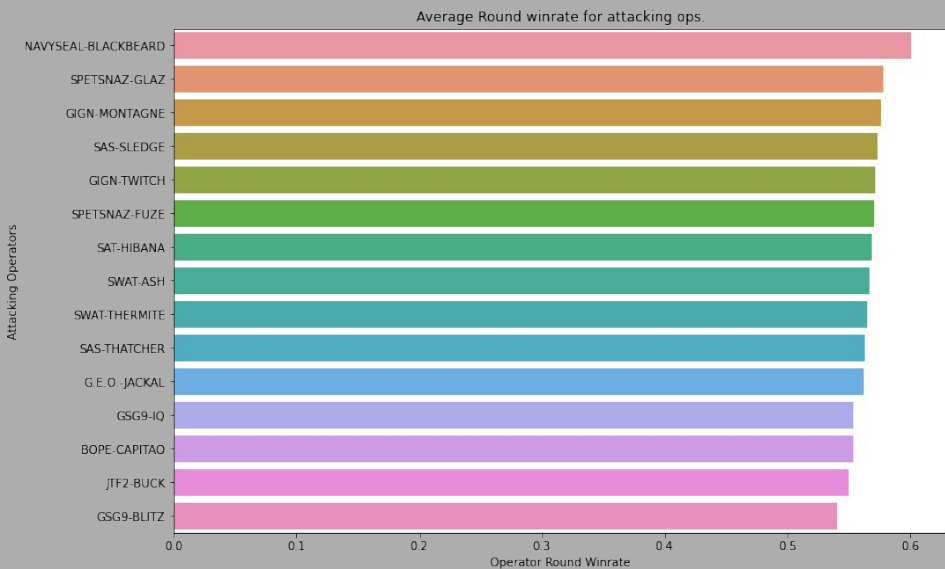
dateid	platform	gamemode	mapname	matchid	roundnumber	winrole	endroundreason	skillrank	role	team	haswon	operator
20170212	PC	BOMB	BORDER	1697802641	2	Attacker	DefendersEliminated	Diamond	Attacker	1	1	NAVYSEAL-BLACKBEARD
20170212	PC	BOMB	BORDER	1697802641	6	Attacker	DefendersEliminated	Diamond	Attacker	1	1	G.E.O.-JACKAL
20170212	PC	BOMB	BORDER	1697802641	1	Attacker	DefendersEliminated	Diamond	Defender	1	0	GSG9-BANDIT
20170212	PC	BOMB	BORDER	1697802641	7	Defender	AttackersEliminated	Diamond	Attacker	1	0	G.E.O.-JACKAL
20170212	PC	BOMB	BORDER	1697802641	3	Attacker	DefendersEliminated	Diamond	Defender	1	0	G.E.O.-MIRA
...
20170412	PC	SECURE_AREA	BARTLETT_U.	1511995901	1	Defender	AttackersEliminated	Diamond	Defender	1	1	NAVYSEAL-VALKYRIE
20170412	PC	SECURE_AREA	BARTLETT_U.	1511995901	3	Defender	AttackersEliminated	Diamond	Defender	1	1	SPETSNAZ-KAPKAN
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No. of games per day



The best team in general

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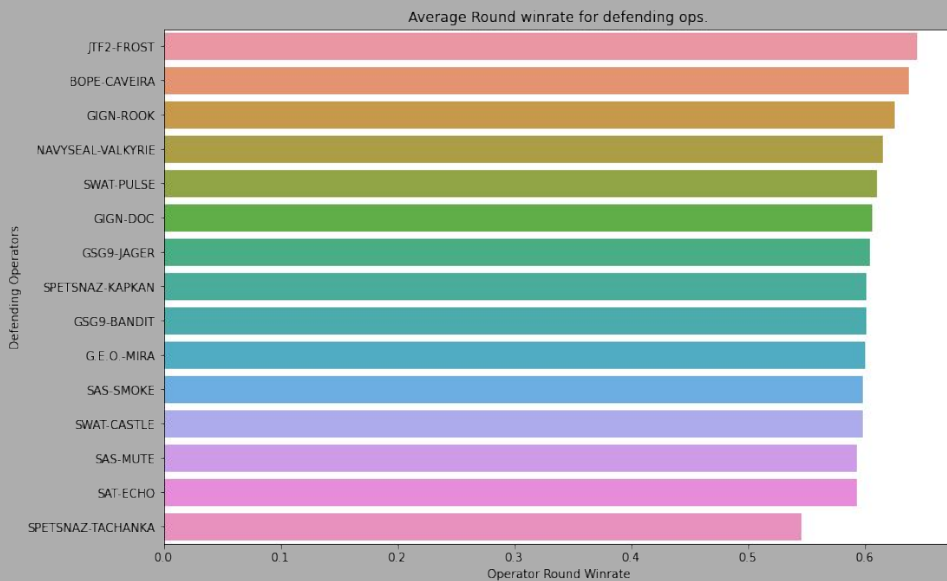
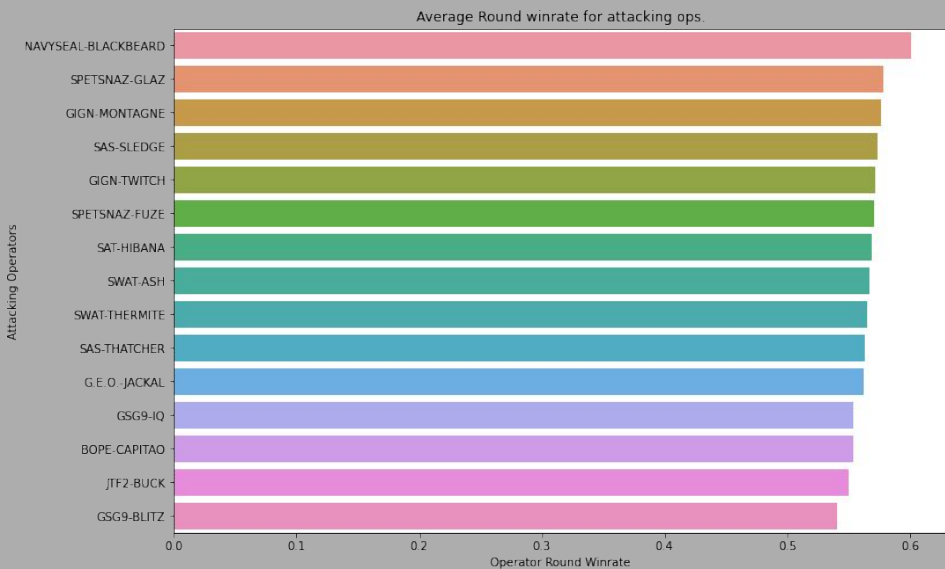
Patch Changes

- **Update 6.1.0; March 16, 2021 Patch:** *Rifle-Shield health reduced from 50HP to 20HP.*
- **Update 3.2.2; July 23, 2018 Patch:** *Rifle-Shield health and speed reduction reduced.*
- **Update 2.3.0; September 5, 2017 Patch:** *Model optimized. Face rigging updated.*
- **June 13, 2017 Hotfix:** *Guerrilla Elite Set added.*
- **Update 2.2.1; June 6, 2017 Patch:** *Hitbox reworked.*
- **Update 5.2; December 15, 2016 Patch:** *Rifle-Shields retweaked.*
- **Update 4.2; September 13, 2016 Patch:** *Rifle-Shield overhauled.*
- **Update 3.2; May 31, 2016 Patch:** *Auto-Loading is now disabled when a Rifle-Shield is equipped.*
- **Update 3.0; May 10, 2016 Patch:** *Introduction alongside [Valkyrie](#).*

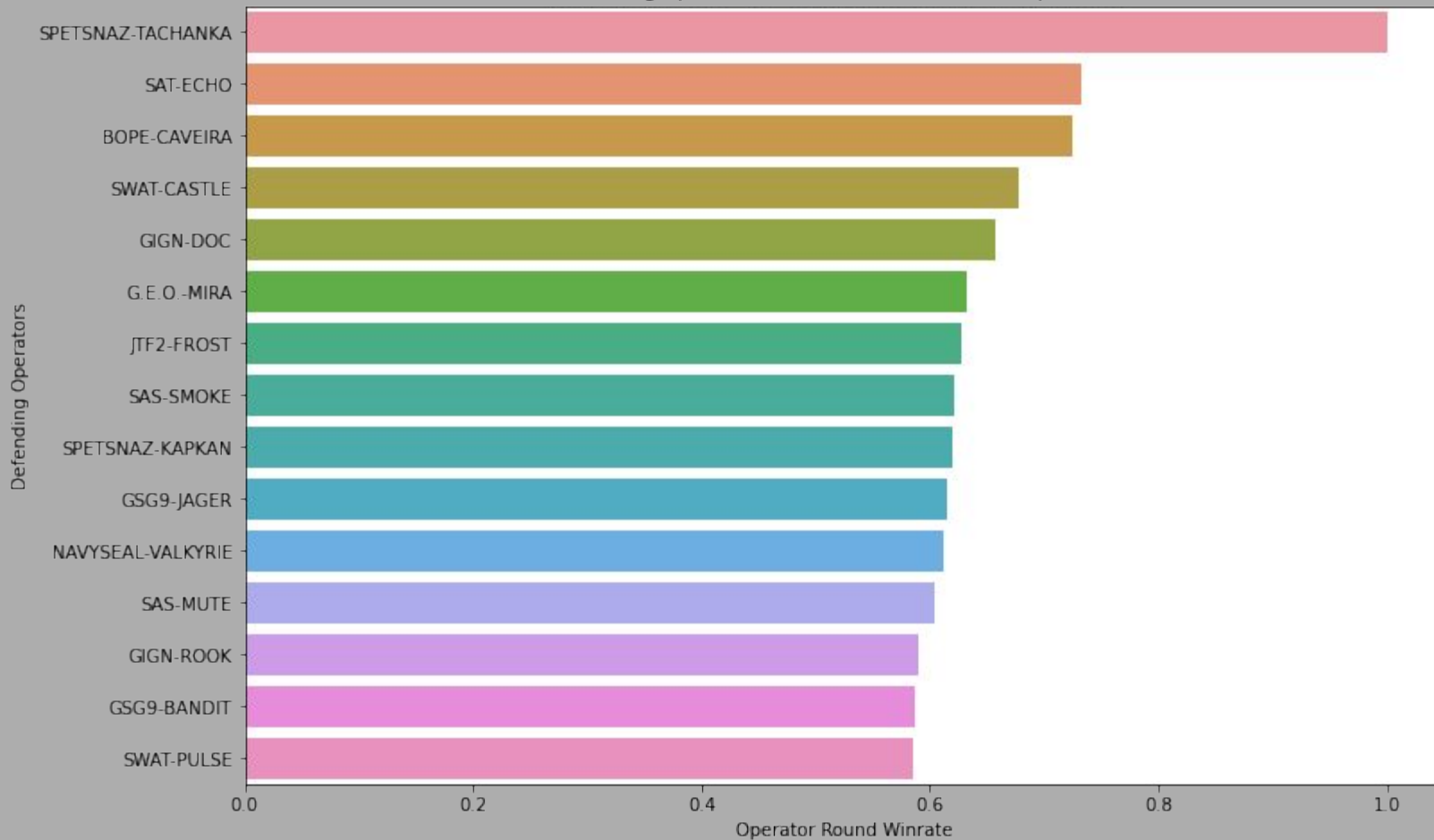
**When you're playing Siege, but memes
are life**



The best team in general



Defending operator Round winrate on the map 'Border'



Cost of running an esports team

Yearly income: \$800 000

Player salary: $-\$74\,000 \times 5$

Player services: $-\$26\,000 \times 5$

Income: \$300 000

Cost of running an esports team

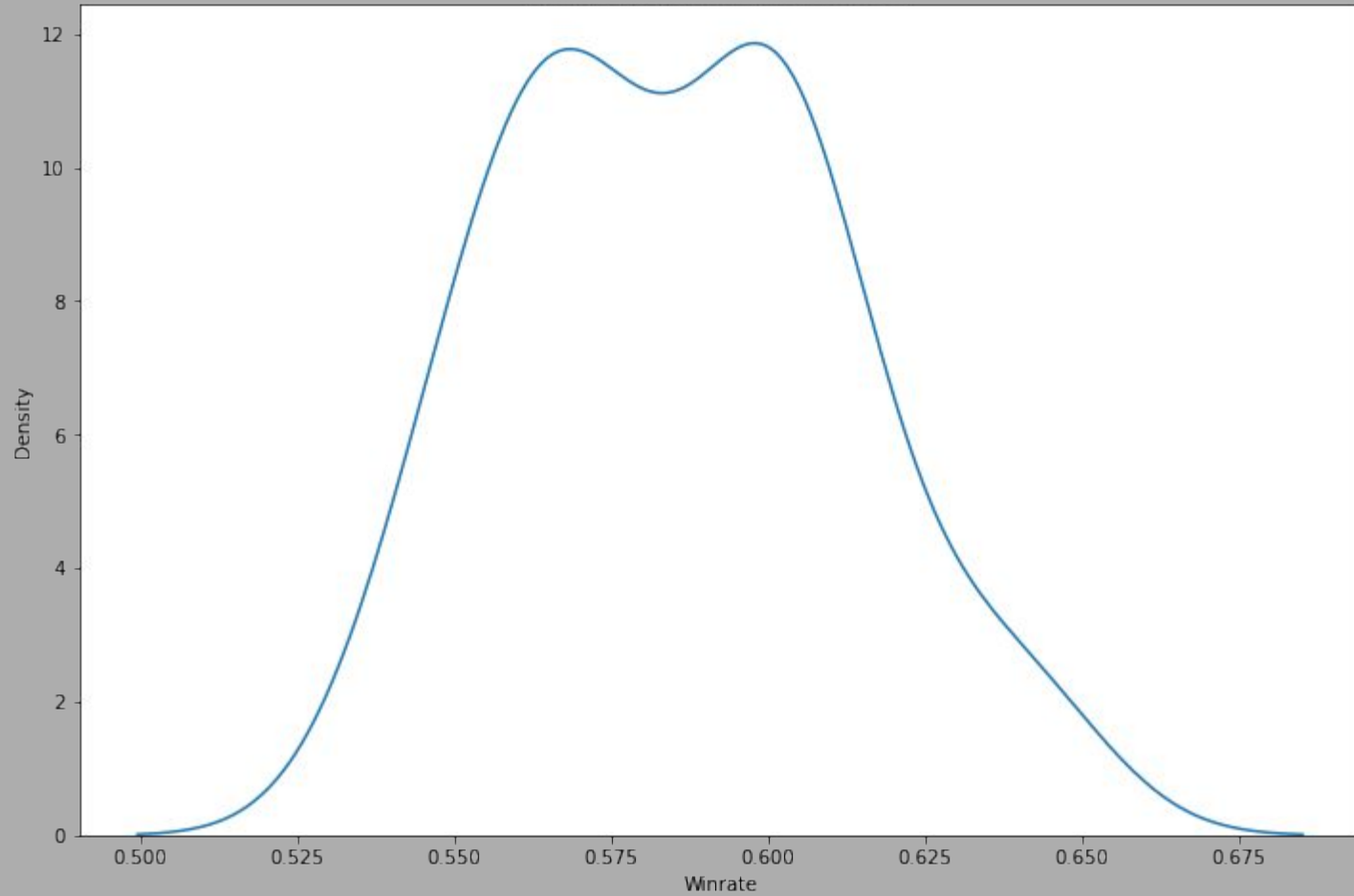
Yearly income: \$800 000

Player salary: $-\$74\,000 \times 15$

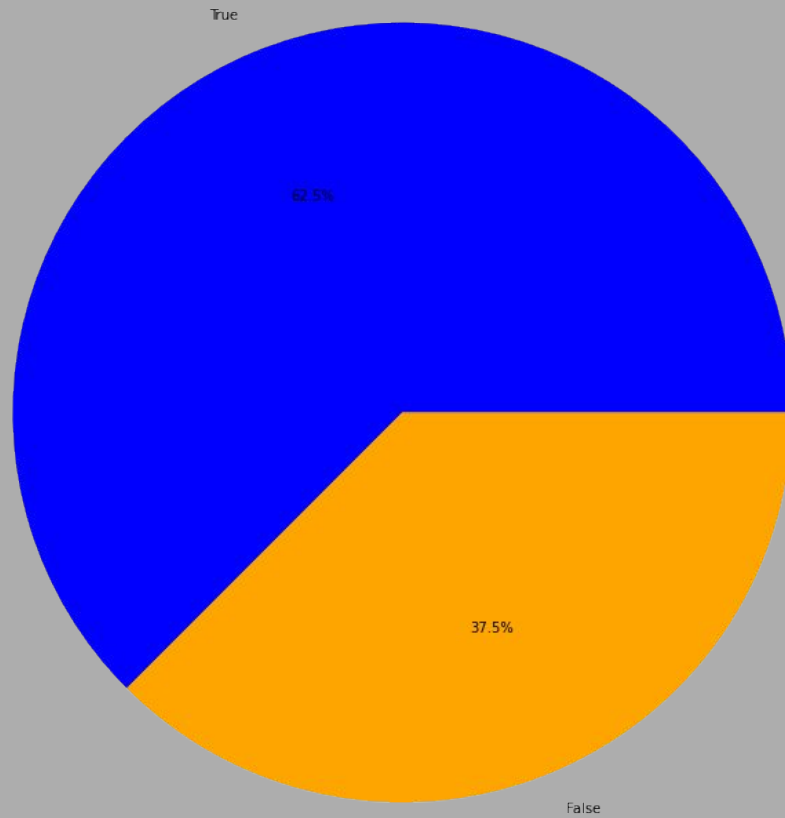
Player services: $-\$26\,000 \times 15$

Income: $-\$700\,000$

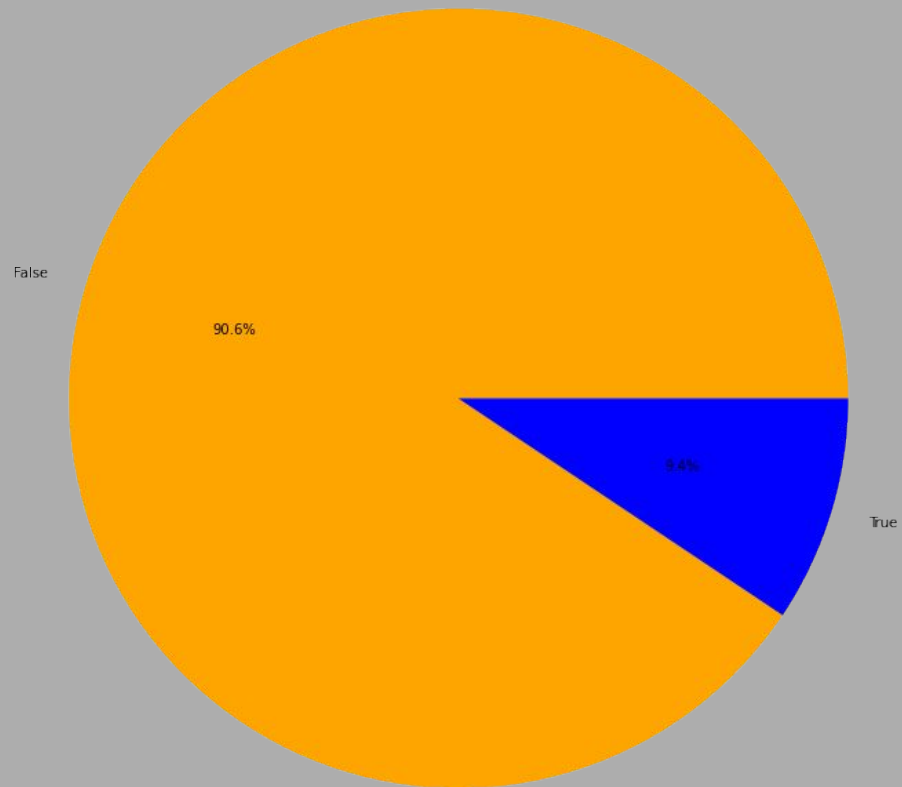
Winrate distribution for operators



Amount of maps where a map-specific team generates a statistically and significantly higher mean winrate than a general team ($\alpha=0.05$)



Amount of maps where a map-specific team generates a statistically and significantly higher mean winrate than our new team ($\alpha=0.05$)



Challenges and learnings

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- It takes a long time to process an obscene amount of data
- Get started as soon as possible
- Statistics is extremely powerful

Moving forward

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- Get a more detailed business approach

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- Take a look at the betting angle

Moving forward

- Get a more detailed business approach
- Take a look at the betting angle
- Make the algorithm of adding operators to our roster more sophisticated

The End