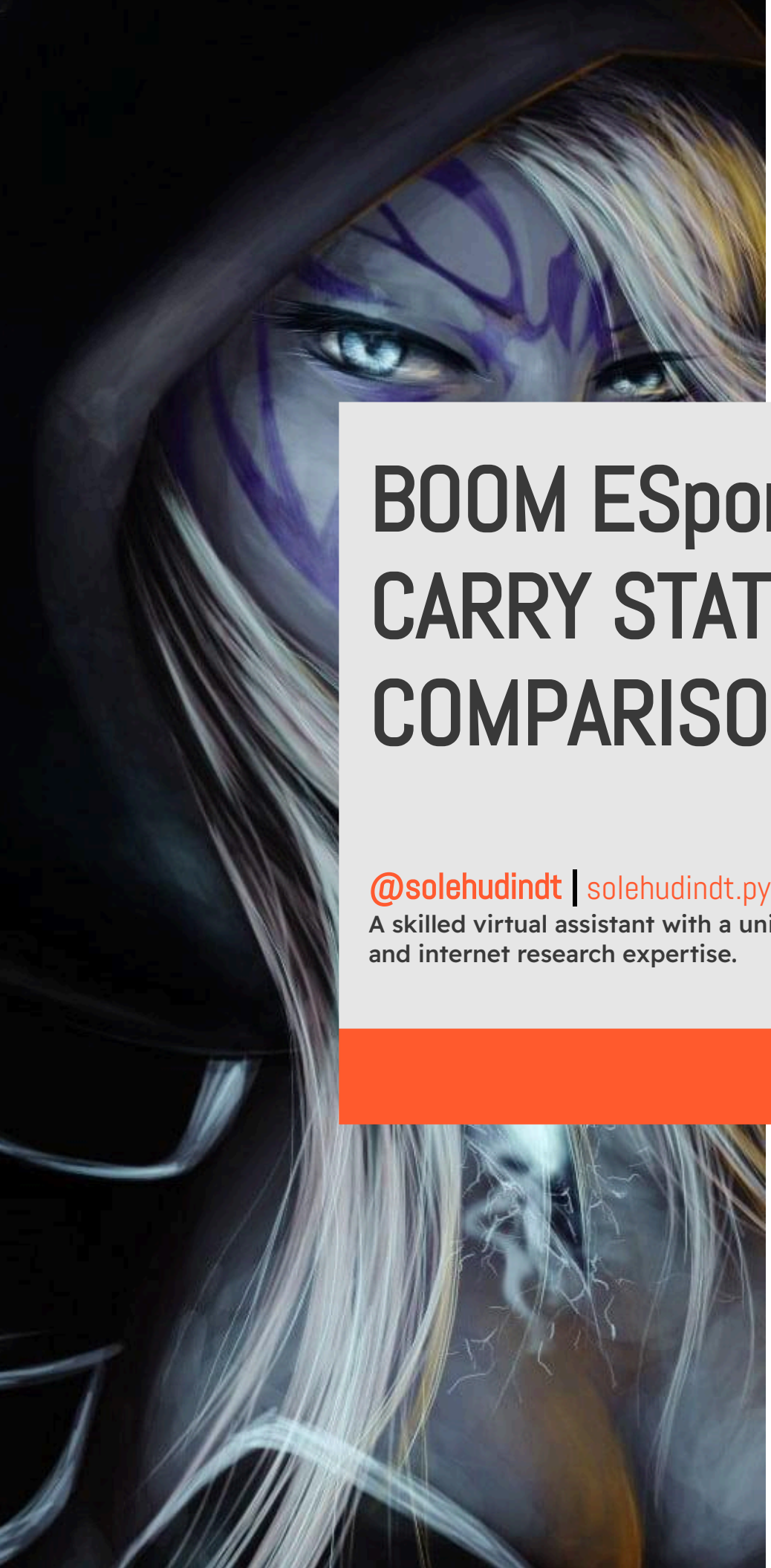


BOOM ESport DotA 2 CARRY STATISTICAL COMPARISON

@solehudindt | solehudindt.pythonanywhere.com
A skilled virtual assistant with a unique blend of data analysis and internet research expertise.

INTRODUCTION

Dota 2, a complex and strategic multiplayer online battle arena (MOBA) game, has captured the hearts of millions of esports enthusiasts worldwide. Boom Esports, a prominent Dota 2 team in Indonesia, has consistently delivered exceptional performances, captivating the regional and international esports scene. This report delves into a data-driven analysis comparing the performance of Boom Esports' former and current carry players.

Boom Esport made a significant change in the early DPC 2023 with one of the changes being *Jackky* the carry player leaving the team to join Bleed Esport and *Natsumi-* came as the replacement. This move has sparked a debate among fans, with some believing that it is a considerable downgrade while others argue that *Natsumi* is a competent replacement.

The carry player holds a crucial position within a Dota 2 team, acting as the primary damage dealer and playing a pivotal role in securing victory. By analyzing key metrics of both past and present carry players, this report aims to identify trends, assess player effectiveness, and potentially glean insights to optimize Boom Esports' future strategies.

All the data used in this case study are collected based on both player performances from the first tour of dpc 2023 using API from open source dota 2 data statistic site opendota.

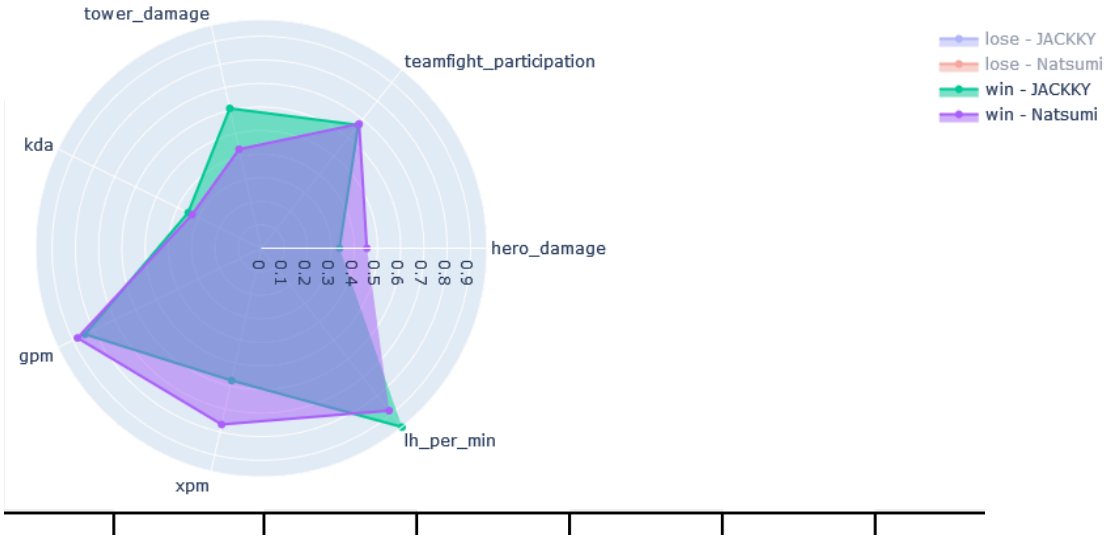
*This is a report version of a more technical article from my blog, you can read it here

HOW?

For this analysis, I utilized a general efficiency equation and analyzed the dataset provided. Using the information available, I calculated two efficiency ratios, one based on Gold per Minute (GPM) and another based on match duration. The resulting formula, which shows the efficiency as the ratio of input divided by GPM or duration is presented below.

$$Egpm = \frac{kda+tower\ damage + hero\ damage}{gpm}$$

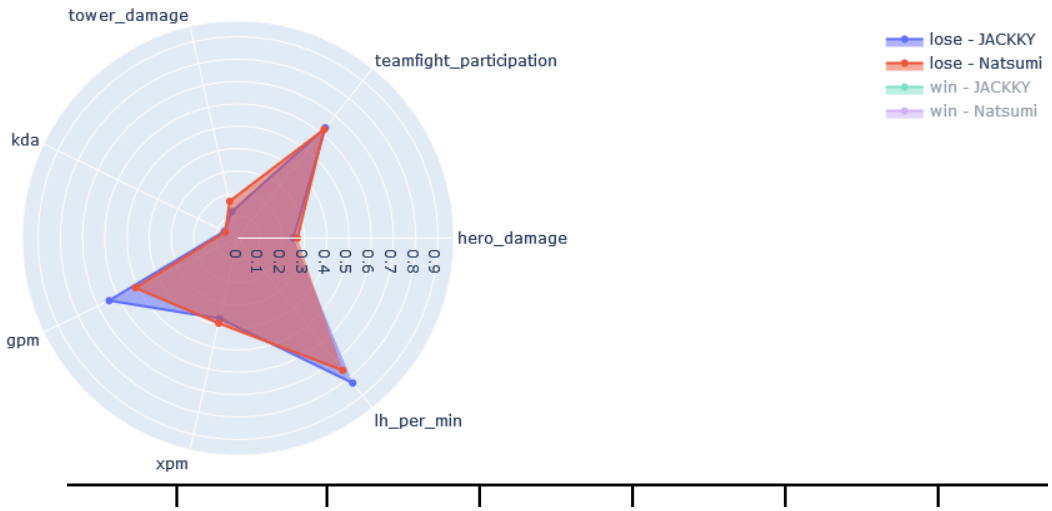
$$Eduration = \frac{kda+tower\ dmg + hero\ dmg + gpm + xpm + teamfight\ part}{match\ duration}$$



WINNING MATCHES

Stronger Performance: Natsumi shines in winning games. He surpasses Jackky in teamfight participation, GPM, and duration efficiency, signifying he actively contributes to securing victories.

Slight Farming Tradeoff: While Natsumi's farming efficiency might be a bit lower than Jackky's, his superior teamfight presence and overall efficiency during winning games highlight his value to the team.



LOSING MATCHES

Lower Stats: Compared to Jackky, Natsumi participates less in teamfights (lower teamfight participation), farms less effectively (lower GPM and last hits per minute), and utilizes in-game time less efficiently (lower duration efficiency).

Possible Cause: This suggests Natsumi might be focusing more on safe farming (indicated by higher GPM efficiency) while neglecting team fights and overall map presence, which could be hindering his team's ability to win.

SUMMARY

After conducting a thorough data analysis and visualizations, the results indicate that Natsumi's performance as a carry player is closely tied to whether his team is winning or losing. When his team is losing, Natsumi's teamfight participation, GPM, and last hit per minute are all lower than Jackky's, and his duration efficiency is also lower. However, Natsumi's higher GPM efficiency suggests that he takes fewer risks while farming.

In contrast, when his team is winning, Natsumi's teamfight participation, GPM, and duration efficiency are all higher than Jackky's,

indicating that he is able to make meaningful contributions to his team's success. While Natsumi's farming efficiency may be slightly lower than Jackky's, his ability to contribute to teamfight and duration efficiency metrics in winning games suggests that he is still a valuable player on the team.

However, it's important to note that evaluating a carry player's effectiveness is a complex process. There are many other factors that can influence a player's performance, such as objective securing, ward placement, and successful ganks. Additionally, different players and teams may have unique play styles and strategies that can impact how efficiency is measured.

Efficiency by GPM

result	name	
lose	JACKKY	0.682481
	Natsumi	0.975250
win	JACKKY	1.536941
	Natsumi	1.384544

Efficiency by duration

result	name	
lose	JACKKY	0.077966
	Natsumi	0.071558
win	JACKKY	0.125195
	Natsumi	0.126762