Impact of Domain Squatting on Official Platforms and Visit Rates to Illegal Game Download Sites

Ikhwanul Ahsan [1, *], Raditya Rahman Maulana [2], Yohan Muliono [3], Ika Dyah Agustia Rachmawati [4]
[1, 2, 3, 4,5] Computer Science Department, School of Computer Science, Cyber Security Program, Bina Nusantara University, Jakarta, Indonesia
Email: [1] ikhwanul.ahsan@binus.ac.id, [2] Raditya.maulana001@binus.ac.id, [3] ymuliono@binus.edu, [4] ika.rachmawati001@binus.ac.id
*Corresponding Author

***Abstract*—This study examines the effect of domain names resembling official platforms on the visit rates of illegal game download sites. Using a comparative analysis of website traffic metrics, we evaluate user behaviors—specifically visit frequency, average session duration, and bounce rate—across two groups of sites: those with domain names similar to official platforms and those without such resemblance. Results indicate that sites mimicking official domain names tend to have higher bounce rates but also show longer average session durations, suggesting that users initially trust these sites but may leave upon realizing they are not legitimate. Furthermore, while overall visit rates are higher on sites with non-similar domain names, the familiarity implied by similar names appears to influence user perception and trust. These findings underscore the impact of domain name similarity on user behavior and highlight its potential for exploitation by sites aiming to mislead users, posing ethical and security challenges in the digital ecosystem.**

Keywords—Domain Name Similarity, Domain Name Spoofing, Illegal Download Sites, Website Traffic, Digital Piracy, Online Trust Manipulation.

I. INTRODUCTION

The importance of domain names does not escape the attention of irresponsible individuals who want to reap profits at the expense of other [1]. The similarity between the domain names of official sites and illegal sites creates confusion among users, who often unknowingly visit illegal sites, thinking they are official platforms. This not only harms the official platforms financially, but also has the potential to harm users, as illegal sites often lack adequate security standards and may contain malware or other threats.

One sector that is very vulnerable to this problem is the gaming industry, which is deeply concerned about the spread of pirated versions, as these can significantly reduce the sales of genuine products [2]. In fact, around 90% of PC gamers have engaged in game piracy, with some repeatedly pirating multiple titles [3]. This extensive piracy results in substantial economic losses, depriving developers of the revenue needed to support further innovation.

Website traffic is one indicator of the impact a domain name has on attracting visitors. When a domain name closely resembles that of a reputable or official site, it may create a sense of familiarity or credibility that encourages users to click on it, leading to an increase in traffic. This phenomenon is often leveraged by websites that seek to divert users from legitimate platforms, as the similarity in names can mislead users into thinking they are visiting a trusted site [7]. The influence of a domain name on traffic can thus be significant, as users are more likely to visit sites that appear authentic or related to well-known brands. Analyzing website traffic helps understand how domain names shape user behavior and the potential security or ethical implications associated with deceptive domain naming [8].

II. LITERATURE REVIEW

A. Domain Name System

Domain Name System (DNS) is a crucial component of the Internet's infrastructure that facilitates the mapping of domain names to corresponding services, enabling the network's effective operation [15]. Indeed, nearly every action on the Internet begins with a DNS query, which is a request for data sent from a user's device to a DNS server. DNS acts as a directory for the Internet, translating userfriendly domain names into IP addresses that computers use to communicate with each other [4]. This process ensures that users can easily access websites and online services without needing to remember complex numerical IP
addresses. Additionally, DNS is critical for various Internetbased services such as email, cloud services, and secure transactions.

B. Domain Squatting

Domain squatting, commonly referred to as cybersquatting, involves individuals or entities registering domain names that are identical or similar to well-known trademarks or brand names, often with the aim of reselling them at a high price to the rightful owner [5]. This practice not only harms a company's reputation but also misleads consumers. Common types of domain squatting include typo-squatting, bit-squatting, homograph-squatting, sound-squatting, and combo-squatting.

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C. Website Traffic

Web traffic is a vital metric for online businesses and organizations [14]. Web traffic represents the flow of data across the Internet, typically starting with user actions such as clicking a link or entering a URL, which then triggers various network-level processes as information travels between servers and user devices [6]. This traffic is primarily initiated through web browsers, where each interaction sends a request to a server that processes and responds based on specific protocols [6]. With the exponential growth in Internet usage each year, the volume of web traffic has surged significantly.

D. Game Piracy

Game piracy is a challenge for the video game industry, characterized by the illegal downloading and distribution of games. Game piracy typically involves unauthorized access to video games, often facilitated by download networks such as torrents and peer-to-peer (P2P) [9]. A large-scale study identified more than 12.6 million unique peers sharing 173 game titles, indicating the widespread reach of piracy [10].

III. METHODOLOGY

A. Research Approach

This study uses a comparative approach to use the impact of using a domain name that is similar to the official platform or website on the level of visits, session duration, and bounce rate on illegal game download sites. This study uses a comparative approach by comparing two groups of sites that have different domain characteristics. Data obtained from these two groups will be analyzed to see if there are significant differences in user behavior.

1) Data Source Grouping :

- Group 1: Sites with domain names similar to official platforms.
- Group 2: Sites with domain names that do not resemble official platforms.

Table 1. Data Groups

Group 1	Group 2
steamunlocked.net	oceanofgames.com
steamrip.com	igg-games.com
steamgg.net	skidrowreloaded.com
steam-repacks.net	repack-games.com
steamunlocked.pro	fitgirl-repacks.site
epicunlockedgames.com	rgmechanics.com
gogunlocked.com	cpyskidrow.com
freegogpcgames.com	ovagames.com
gog-games.to	gamepcfull.com

2) Variables Measured :

- Monthly Visit Total: The number of visitors accessing the site in a month.
- Average visit Duration: The average amount of time user spends on the site.
- Bounce Rate: The percentage of visitors who leave the site after viewing only one page without further interaction.

B. Data Collection

The data collection was conducted using web analytics tools. Web analytics tools are software or browser extension used to collect, analyze, and report data about visitors and activity on a website. These tools help site owners or managers identify areas for improvement, optimize marketing campaigns, and ultimately enhance financial and non-financial performance [11].

1) Web analytic tools used:

- SimilarWeb Extension

  SimilarWeb is a powerful digital tool used for competitive intelligence and website performance evaluation across various sectors, offering metrics such as unique users, visit duration, and total visits over specified periods [12]. In this study, SimilarWeb was used because it has a good reputation as a web analytic tool.
- SEMrush

  SEMrush is a multi-purpose tool widely used in digital marketing and education, especially for search engine optimization (SEO) and project-based learning. SEMrush features include domain authority analysis, keyword research, ranking monitoring, and competition analysis [13]. In this study, SEMrush was used because it has average visit data over a fairly long period of time.

2) Data Collection Period

The data for this study was collected over a period of one month, specifically during October 2024. This time frame was chosen to ensure the consistency and relevance of the data while capturing seasonal trends in user behavior.

IV. RESULT

After the data was collected and calculations were performed, the results were obtained as follows:

Table 2. The total traffic data for October

Total Monthly visit (Oct 2024)	**Website name**	**Group**
23,000,000	steamunlocked.net	1
9,600,000	steamrip.com	1
1,200,000	steamgg.net	1
98,300	steam-repacks.net	1
72,300	steamunlocked.pro	1
7,700	epicunlockedgames.com	1
1,400,000	gogunlocked.com	1
2,600,000	freegogpcgames.com	1

1,600,000	gog-games.to	1
1,200,000	oceanofgames.com	2
7,800,000	igg-games.com	2
16,300,000	skidrowreloaded.com	2
3,800,000	repack-games.com	2
26,100,000	fitgirl-repacks.site	2
620,100	rgmechanics.com	2
20,600	cpyskidrow.com	2
3,900,000	ovagames.com	2
920,700	gamepcfull.com	2

Table 3. The bounce rate data for October:

Bounce Rate	Website name	Group
33,01%	steamunlocked.net	1
27,11%	steamrip.com	1
47,22%	steamgg.net	1
41,67%	steam-repacks.net	1
36,92%	steamunlocked.pro	1
5,38%	epicunlockedgames.com	1
52,28%	gogunlocked.com	1
37,19%	freegogpcgames.com	1
40,31%	gog-games.to	1
27,45%	oceanofgames.com	2
30,46%	igg-games.com	2
30,03%	skidrowreloaded.com	2
31,3%	repack-games.com	2
34,91%	fitgirl-repacks.site	2
54,18%	rgmechanics.com	2
34,34%	cpyskidrow.com	2
36,77%	ovagames.com	2
45,72%	gamepcfull.com	2

Table 4. The average visit time data for October:

Average visit duration (in minute)	Website name	Group
3:18	steamunlocked.net	1
3:51	steamrip.com	1
2:14	steamgg.net	1
2:28	steam-repacks.net	1
0:37	steamunlocked.pro	1
2:38	epicunlockedgames.com	1
2:00	gogunlocked.com	1
2:38	freegogpcgames.com	1
2:57	gog-games.to	1
2:57	oceanofgames.com	2
3:06	igg-games.com	2
3:29	skidrowreloaded.com	2
3:05	repack-games.com	2
3:18	fitgirl-repacks.site	2
1:01	rgmechanics.com	2
0:45	cpyskidrow.com	2
2:49	ovagames.com	2
1:46	gamepcfull.com	2

From the table above, the following comparison can be taken is:

- Total visits:
  Group 1 = 39,578,300
  Group 2 = 60,661,400
- Average bounce rate:
  Group 1 = 39,57%
  Group 2 = 36,14%
- Average visit time:

Group 1 = 1471 second = 2 minutes 43 seconds
Group 2 = 1291 second = 2 minutes 23 seconds

V. DISCUSSION

The results of the study showed significant differences in user behavior between sites with domain names similar to the official platform (Group 1) and sites with domain names that were not similar (Group 2). The total visits in Group 2 were higher than Group 1, with a difference of around 21 million visits. This may be due to variations in other factors that affect site popularity beyond the similarity of domain names. However, the bounce rate in Group 1 (39.57%) was higher than Group 2 (36.14%). This shows that in Group 1 there tends to be a bounce where visitors immediately leave the site without interacting with anything. This is likely because they immediately realize that the site is not an official platform or the content does not match their initial expectations.

On the other hand, the average visit time in Group 1 (2 minutes 43 seconds) is higher than Group 2 (2 minutes 23 seconds), indicating that despite the higher bounce rate, visitors who stay on the site tend to spend more time. This may be because users perceive sites in Group 1 as more trustworthy because their domain names resemble the official platform, so they spend more time exploring the site before deciding to leave. Overall, these results show that domain name similarity can influence several aspects of user behavior, but the impact varies across different metrics.

VI. CONCLUSION

This study concludes that the use of domain names similar to official platforms has an impact on several aspects of user behavior on illegal game download sites. Sites with similar domain names tend to have higher bounce rates, indicating that users are more likely to leave the site as soon as they realize that it does not meet their expectations. However, the average visit time on these sites is also higher, indicating that users who do stay may perceive the site as more trustworthy. Although the total number of visits to sites with dissimilar domain names is higher, domain name similarity has been shown to influence users' initial perceptions and increase the likelihood that these illegal sites are perceived as legitimate sources.

These results emphasize the importance of domain name factors in building user perceptions and show how this aspect can be exploited by irresponsible parties to increase their site traffic. Further research is needed to better understand the influence of other variables, such as site design and content, on user behavior on illegal sites.

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