# Comparative Web Performance Evaluation of Leading Mobile Platforms

Aira Udaybhasker, Popuri Varun Kumar, Tangaturu Devendranath Reddy and Radha D

Department of Computer Science and Engineering,

Amrita School of Computing, Bengaluru, Amrita Vishwa Vidyapeetham, India

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Abstract:

In today's world of the Internet, the performance of websites plays a vital role in driving business success and keeping users satisfied. The paper aims at analyzing three popular sites categorized as the mobile site, known in this work as Website 1, Website 2, and Website 3. The assessment focuses on factors such as page load speed, mobile and desktop responsiveness, SEO optimization, user interface design and website traffic. The metrics analyzed using tools such as SimilarWeb, Pingdom, and SEOSiteCheckup show how each impacts users experience and search rankings. The identified insights help to answer fundamental research questions by presenting the advantages and disadvantages of each platform and providing information about their efficiency and possible improvement. From these findings, we provide practical implications to enhance performance, usability, and user satisfaction of mobile websites. In conclusion, this research aims at contributing to the current knowledge of the mobile web environment so as to inform the creation of more effective and efficient platforms in the constantly growing international mobile market

#### 1 INTRODUCTION

Web management still changes because of the advancement of technology, and the internet acts as a central tool in business online. While in the past such companies used to directly interact with the customers, today they are fully dependent on the technology for listings, customers, and markets. The specimens like Website 1, Website 2, Website 3 that are popular mobile sites not only expand the coverage for digital services but also improve the openness and ease for users. The key to the effectiveness of a mobile website is, therefore, the effective, easily navigable, and well-structured content and clear and effective interaction between all the players in the process.

In the heavily saturated world of Internet, the function of a mobile platform depends on web performance factors and, in particular, SEO (Siji and Goutham, 2019). Web analysis is important for such purposes as users behavior study, SEO efficiency evaluation, security issues, and utilization of the best user experience. Elements such as page load time, mobile friendliness, SEO report, and user engagement help managers to discover opportunities (Radeshkumaran and Harini, 2015), (Hegde and PM,

2014). These elements should be optimized in a market where convenience is a key to success; a perfectly optimized and convenient mobile platform can help to become a leader on the market and increase conversion coefficients. Web analysis, as a result, can be a very effective means of understanding the strengths, weaknesses and prospects of the sector in the field of the online mobile platform.

This research performs a detailed web review of three widely-used mobile websites, namely Website 1, Website 2, and Website 3 using SimilarWeb, Pingdom, and SEOSiteCheckup. Evaluation of load time, device performance, and search engine optimization (SEO) optimization, user experience (UX), design and layout, security measures, content quality, and marketing strategies are the major areas assessed in the analysis. In this paper, the results obtained in data collection and web performance analysis are used as the basis for comparing these platforms.

The rest of the paper is structured as follows: Section 2 presents the Literature Review, Section 3 explains the Experiment Setup in detail, Section 4 covers the Experimental Results, and Section 5 concludes by summarizing the findings and suggesting future research directions.

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#### 2 RELATED WORK

In the current world, website performance and user experience are now important aspects organizations, including those that operate in the niche sectors such as travel and tourism. Close examination of this literature survey will reveal a set of studies on how to reap the benefits of website optimization, how to use analytics and, in general, how to improve the user experience across numerous industries. Whether it is enhancing the loading time of a website through image optimization and web traffic analysis or the surprising role of data science in helping inform strategic decisions for the web presence these works emphasize the necessity of having a powerful online platform. Especially important to corporations that are managing patrons' experiences, their study underlines the importance of technology advancements toward increasing user satisfaction, revenue, and resources. These findings can be useful for building various strategies of web sites in the customer-oriented industries to achieve proper interchange and improvement of service quality.

N. Kumaladewi et.al applied WebQual 4.0, Importance Performance Analysis (IPA), and GTmetrix to a study of user satisfaction and web performance. A survey was conducted among 84 students and the obtained WebQual index average, equal to 81% points, suggests the Web site quality, with usability 79%, information quality 83%, and service interaction quality 83%. The IPA analysis brought out important areas of concern regarding learnability or the ability to teach and discuss the site as well as the ease of navigation improvement when compared to the GTmetrix performance test that gave the site a Grade C indicating general satisfactory but could be improve technical performance. On balance, the findings reveal that indeed the website is positively evaluated; nonetheless, targeted improvements are needed to increase users satisfaction and performance of the website (Kumaladewi, Rahajeng, et al., 2023).

The work of Kumar et.al emphasize the vulnerability of websites and stress the idea of monitoring and analyzing the performance of Websites with respect to accessibility, usability and security. SEOptimer and Qualidator are two tools they use to perform audits, and these highlight crucial changes that have to be made for users to have a better experience as well as point out the strongholds in security. It is for this reason that their studies show the significance of such tools in determining and addressing problems that may hamper user

interaction and put a spotlight on security threats. The study recommends performance checks as a best practice to ensure continuous quality and safety measures of website in the growing technological environment (Kumar, Kumar, et al., 2021).

The study by Cociorva examines the flow dynamics of a website from the e-business standpoint using multiple analytics tools to measure critical parameters, including performance, accessibility, and SEO. This paper explains how detailed analytics can be useful in understanding the patterns of the users and improving the e-commerce business strategies to create greater operational efficiencies. Cociorva's work strongly focuses on the systematic analytics of the problems and their efficient solution in order to enhance the satisfaction of users and increase business outcomes. According to his study, there is a critical use of web analytics to shape business innovation and sustain competitive advantage in the digital economy (Cociorva, 2023).

The study examined by Sova et.al use GTMetrix inside the Waterfall development environment to analyze the performance of the startup websites, concentrating only on the metrics that affect the usability of web resources and the efficiency of business activity. They describe how performance evaluations during the early stages can have a large impact on the design and functional improvements needed to make startups work. The study discusses how KPIs remain crucial in offering developers insights that inform the determination of user experiences and general business results that are far better than before. This research would be beneficial for young enterprises that are interested in building and improving their homepages through systematic development and testing (Sova and Tasliza, 2024).

Jansen et.al provide a good and detailed overview of methods for website evaluation with an emphasis on web analytics and KPIs. They discuss extensively the benefits and processes that are linked to log files and page tagging in the capture of precise user information. Such data when interpreted properly assists in formulating strategic changes which will make website functionality meet business objectives, improve customer experience, and increase revenue. Their research emphasizes on how businesses should incorporate analytics into their plans, as well as the importance of analytics in enabling organizations to make sound decisions and improve customer engagement across the digital space (Booth and Jansen, 2010).

The research conducted by Treiblmaier et.al gives a comprehensive account of the various website analysis techniques and gives a comprehensive comparison of the methods hence giving a framework in the assessment and improvement of the usability of website with the user. Thus, the presented paper is useful for both academic researchers and web developers as it categorizes and describes various evaluation techniques and their effects. In addition to revealing the state of the art in Web analysis, this approach underlines the need for further adaptation to users' feedback and new developments to enhance the Websites' effectiveness and satisfaction rate (Treiblmaier, , et al. , 2007).

Singh, V.K. et.al conducted a comparative analysis of journal coverage among three major databases: SciVerse Web of Science, Scopus, and Dimensions database. In their study they used the most recent master journal lists, showing big discrepancies in terms of coverage; Web of Science offered the least coverage while Dimensions provided the broader and most extensive coverage. Thus, 99.11% of the 58,620 total journals inside of WoS are also inside both Scopus and Dimensions, with 96.42% of Scopus records also inside of Dimensions. The study also showed differences in article production trends and disciplinary distribution for 20 countries between the years 2010 and 2018. The result shows that the selection of database can significantly affect the bibliometric analysis, and also, this study raise the possibility that Dimensions may be especially beneficial as it is more inclusive (Singh, Hassan, et al., 2021).

Md. Tutul Hossain et.al developed a web-based application for performance testing of e-commerce site with using the WebpageTest, PageSpeed Insight & GTmetrix performance testing tools. This study concerns with nine performance factors such as Load Time, First Byte, Total Blocking Time and so on and that will examine ten e-commerce sites framework Bangladesh. The is PHP/MySQL, CSS/HTML, allowing entering a URL to analyze its performance automatically. Findings of this study show that; WebpageTest and GTmetrix yielded detailed reports where site7 had the lowest TBT of 0.03s and site10 the highest LT of 17.78s. Further plans for update is creating the mobile version of the site and increasing testings (Hossain, Hassan, et al., 2021).

Panduwika et.al aims at optimizing the SFV website through using Google PageSpeed Insight optimization techniques. The optimization included resizing images by 30% and converting them to the WebP file format improving the website loading speed with consideration to image quality. These optimizations brought the PageSpeed score from 47 to 63 proving their efficiency. From the user

satisfaction survey done on twenty participants it was found that 82% of the users were satisfied with enhanced performance of the website such as loading speed and image quality. Thus, further validates the need for a consistent evaluation of the site's performance and improvements in areas that affects the User Experience (Panduwika and Solehatin, 2024).

Abrar M. Almatrafi et.al aims at examining the effect of employing web analytics tool on the performance of small and medium enterprises SMEs in Saudi Arabia focusing on the e-commerce segment. In the present research, applying data collected from interviews of eight employees of SMEs, the authors aimed to investigate the use of Google Analytics, Zid Analytics, and other tools. Main outcomes observed with the use of web analytics tools include positive impact on financial and non-financial performance, enhanced decisions making, and achievement of strategic objectives of businesses. The study revealed that the application of the above tools increases business performance, clients satisfaction, and organizational effectiveness (Almatrafi and Alharbi, 2019).

The study conducted by Subbalakshmi et.al propose an original Automatic Analytical Model to Recommend Web Services based on Singular Value Decomposition for feature reduction. The system also identifies preferred services by disregarding additional and excessive characteristics in service descriptions. Subsequent to the feature reduction technique, other methods, such as single linkage and ward linkage, are then used to compare the similarity score. The methodology enhances on scalability and accuracy in the selection of the web service the ranked list of web services is obtained through analyzing dendrograms as a consequence. This approach enables the firm to deliver efficient as well customized service recommendations (Subbulakshmi, Ramar, et al., 2018).

Some problems of accessibility of Web sites have been investigated by P.A Vargas et.al and also detailed by the webometrics ranking in 22 hospital Web site. Such matters include the evaluation frameworks for the purpose of the world wide web consortium websites proposed by them. In this process, the level of accessibility were validated for several hospital websites, therefore, to identify the ease with which a website could be accessed according to the WCAG 2.0 standards, WAVE Accessibility Checker tool was used. In the present work, commonly the most violated types of pattern in the analysis was role, name and value which depict 13.4% followed by information and relationships also

guidelines of content without text with 12.8 Because of some of the described problems, the study has revealed the need to establish and enhance the accessibility practices of the Web in order to continuously enhance website and further make content accessible to all users including the disabled people (Vargas, Acosta, et al., 2018).

A comparative study conducted by Panchal et.al reviews the sustainable developmental trends of digital marketing approach, SEO, SEM. It also reviews literature about patterns and developments in digitalization of marketing practices. The authors employ a discussional approach, examining a number of tools like keyword analysis and bidding strategies of SEM. This case involves observations of competitor bid costs, and additional methodology includes identifying optimal keywords. The findings also demonstrate that both SEM and SEO are used for audience remove The increasing competitiveness, therefore, makes the optimisation a cornerstone to success. Information about other attractives of digital marketing platforms for instance, monitoring the success of the campaigns is also given(Panchal, Shah, et al., 2021).

The study examined by Alfiana et.al focuses on how SEO can be used in order to enhance Web page ranking on search engines. The methodology used in the development is the Waterfall model which consists of analysis, design, code, test and maintain phases. It means the optimization process involves on-page and off-page optimization including title tagging, meta description, keyword usage, and link building. As the evaluation proves, the execution of SEO strategies enhances website visibility and its ranking on SERPs ultimately enhancing traffic to a business(Alfiana, Khofifah, et al., 2023).

From the related studies, it is evident that the factors such as website optimization, user experience, significantly web analytics, improve organizational performance in different sectors including travel, e-commerce, and education. These works stress the need to enhance website loading speed, traffic monitoring, and use of analytical tools in decision making with regard to customers' satisfaction. Web analytics and optimization is one of the prominent areas of internet marketing business research that has been focused in the context of enlightening on how business enterprises have effectively applied it in achieving overall business performance, customer engagement and service deliveries. As such, the current paper goes further from this ground by providing a comparative web analysis of three major real estate platforms Using SimilarWeb and SEO site checkup, we have assessed

the platforms on SEO readiness, User experience, Marketing approach and strategies, thus giving a deep insight on the platforms' strengths and weaknesses.

#### 3 EXPERIMENTAL SETUP

In this study, we selected three most frequently visited mobile websites which we will call Website 1, Website 2, and Website 3 for the full-fledged web performance evaluation. The evaluation was conducted using three specialized tools: It is SimilarWeb, Pingdom, and SEOSiteCheckup. With these tools, it was possible to evaluate such aspects as Web Speed Load Times, Responsiveness on Different Device Types, SEO, UX Design, Security Options, Content Quality, Geographical Reach, Marketing, Customer Relations, Quality of Content, and User Engagement.

We also used SimilarWeb in order to assess website and marketing trends to determine the web traffic, characteristics of visitors, and marketing initiatives adopted by each site. SEOSiteCheckup offered its users an opportunity to have a comprehensive look at the SEO health by assessing factors such as security, speed, and other factors that influence the SEO status. The websites' real-world performance across mobile was tested using Pingdom for web speed load times and devices. These tools allowed for making a statistical comparison of the effectiveness of each website on all identified criteria. Utilizing information from these sources, the research provided an overall assessment that outlined the relative advantage and disadvantage of each mobile website and how each of them performed in terms of SEO, usability, content quality, and level of user engagement.

#### 4 EXPERIMENTAL RESULTS

Mobile websites were assessed using tools such as SimilarWeb, Pingdom, and SEOSiteCheckup. SimilarWeb gives details of website traffic, the users, and marketing trends, thus giving a real picture of user interaction and usage of the site. Pingdom measures page load times and finds areas that could benefit from optimization in order to improve website performance. These are the SEO aspects that SEOSiteCheckup considers in the assessment of site rankings and the reach of the target audience, namely the keyword and backlink. Altogether, these tools create a set of strategies for evaluating and improving

the user experience, SEO state, and platform performance of Website 1, Website 2, and Website 3.

#### 4.1 Web Speed Load Times

In the current world with increasing use of the internet, the time that it takes for a website to load is very important. It is also important to note that Website A was found to load in an average of 0.81 seconds, which will not only greatly improve the satisfaction level of users, but may also help increase conversion rates not forgetting the improved search engine visibility. On the other hand, Website B takes more time to load, a total of 6.33 seconds, and this can be very off putting to clients and their likelihood of abandoning the site, pulling down its search ratings. Website C load time was 2.6 seconds and it also has some issues with the bounce rate as users expect that a website should be loaded in less than 3 seconds. This analysis brings out the need for website optimization; every website needs to improve on their speed and one of the ways is through image optimization, caching and reducing the number of http requests.

# 4.2 Responsiveness Across Devices

The examination of the responsiveness across the devices shows the disparities of the user access patterns for three websites. The analysis of the visitor's source for Website 1 reveals that almost equal numbers of visitors use the desktop web (48.2%) and mobile web (51.18%) as can be observed in Fig. 1. On the other hand, Website 2 shows an exclusive inclination to mobile web access with only 5.43% of the users using the desktop while 94.57% users using the mobile as represented in Fig. 2 below. Like Website 3, the mobile usage preference is evident with only 13.47% of the users doing it on desktop while 86.53% on a mobile as depicted in Fig. 3. This data clearly demonstrates the need to have mobilefriendly websites since the majority of users on Websites 2 and 3 use their mobile devices to access the sites, thus merits the use of responsive design to improve on the experience of users across the devices.

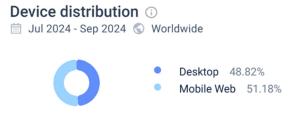


Figure 1: Device Distribution of Website 1



Figure 3: Device Distribution of Website 3

## 4.3 SEO Optimization

As clearly indicated in the keyword data set, Website 1 (blue) receives the highest clicks with keywords such as 'apple', 'iphone' and 'apple tv'. This means that Website 1 SEO strategy comprises focusing on high search volume brand related terms, though there is a dip in volume on some keywords like 'iphone 16' and 'iphone 15' which shows that there is need to update some of the models. In Website 2 (orange), there is a high traffic for the keyword "samsung" indicating that there is a strong correlation between brand and SEO keywords; however there is a slight trend of decreased search volume and more focus should be made on updating the site's content on the latest releases on Samsung. Website 3 (green) has a good level of organic traffic for such keywords as 'shein', which means targeting e-commerce or trending products successfully but the website nearly has no visibility for other tech-related words. As indicated in the Fig. 4, it was evident that each of the



Figure 4: Insights based on Top Keywords, Search Volume and Competition

websites could attain a better SEO by applying an optimum content strategy for the new trends and using a combination of the organic and paid approaches in the high competition keywords especially those that have higher trend in the search.

# 4.4 User Experience (UX)

Website 1 is rather famous for its clear and simple navigation that allows achieving a great homogeneity of UX across all the devices. User experience is simple, intuitive navigation, and multiple integrated tools and accessibility features that matter to users of all skill levels. The smooth transition between the hardware and software and the relatively fast response time make the platform particularly appealing to those users who prefer operation without complications. Website 2 aims to provide more functionality and user options in terms of personalization, compared to Website 1. While this approach is lovable by users who love to interact with the different functionalities, the availability of many options feels congesting to some users as they don't want many functions. On the other hand, Website 3 provides a relatively fresh look which is almost stock, in comparison with the other two websites in the project. It provides a clean, fast experience which still stays true to the Android looks and feels while introducing new elements exclusive to the tablet. Website 3 is significantly widely used to help the users because of the platform that is constantly updating with new content and features.

#### 4.5 Design and Layout

The first website follows the minimalism design paradigm which focuses on the simplicity, the straight lines, and the beauty of the design. This design consistency across devices reinforces brand identity and also creates an environment of familiarity to the users. Its layout choices are about functionality and usefulness, which helps to create a positive interaction between design and usability. Website 2 is less conservative and more experimental in design; the use of bright and clear images and graphics make this site eye-popping. It has been also a first mover in bringing innovative device form factors like the foldable type to enable new forms of engagement with a device. This type of design is particularly appealing to those who like to be on the leading edge of technology. However, Website 3 does not bear a complex design, which is set in simplicity and the lack of glittering and sparkling elements. They continue to keep their devices' look professional and simple for those who do not wish to have complicated designs on their devices. While not as unique as the other three, Website 3 is built on the premise of durability and functionality.

#### 4.6 Security Features

Website 1 is oriented to offering the maximum protection with the main reference to the user's personal information. Some of the features include facial recognition, app tracking transparency and the closed environment that helps the company to shield the user data from outside intruders. These measures make it number one for users who want to have full control of their information privacy. Website 2 equally provides reliable security measures of an enterprise level such as Knox Security that is intended to protect data and applications. The secure folder feature also adds to the privacy, you have the option to put your personal data and documents in another secure encrypted space. Due to this high level of security, Website 2 is especially suitable for business persons and users who deal with confidential information. Website 3 also provides basic security options like fingerprint and face identification which makes the safety needs of users meet. They don't have some of the more sophisticated enterprise safeguards of Website 2, but for average personal usage, they are sound.

#### 4.7 Content Quality

Website 1 is very particular with the quality and safety of the information that it provides to its clients. It offers a limited number of 'edgy' applications, contents and system updates that would meet high standards of quality. The audience can be confident that the application of strict standards can make content safe and enhance its functionality. Website 2, although has a great number of applications, some of which are exclusive, services, and payment solutions, can be of variable quality due to the use of third-party software. This variety is to provide users a lot of different tools and media, but some may get annoyed by the fact that not everything is as polished as in Website 1. Website 3 is all about basics of the website with a simple content environment that has few if not any preinstalled applications and services. It stands well with those users who are most particular about not cluttering their gadgets with unnecessary applications and services since they can manage them on their own.

## 4.8 Geographical Coverage

The region preferences of the users are depicted in the Fig. 5 which shows geographical coverage of the websites. The largest number of visitors come from India, while the second most number of visitors are from the United States, third from Brazil, fourth from Italy and fifth from Germany. Overall, the set data points to different preferences of the three websites within these regions. While Website 2 is clearly preferred in the Indian, Brazilian, Italian and, to a lesser extent, German-speaking regions, it is evident that Website 2 has regional strengths. At the same time, users of the United States demonstrate high popularity of Website 1, which points to the different actions and conditions in this area. The study also highlights the differences in the competition and the users' preferences by geographical region, which is important information when conducting a strategic analysis and advertising campaigns.



Figure 5: Geographical Coverage

#### 4.9 Marketing Strategies

According to the findings, Website 1, Website 2, and Website 3 have different social media and display ads plans. As seen in the chart Website 2 gets more traffic from social media referral with YouTube and Facebook showing a lot of emphasis on video content and more engagement via such media platforms. Website 1 is not far behind with a significant amount of traffic from Reddit, linkedin and other social media platforms which suggest a focus on discussion based platforms where establishing brand affinity is the priority. Website 3 is most effective on Twitter and YouTube, with communicative, technically oriented audiences in real-time and via video. As for display ads, Website 1 is ahead in the "TV Movies and Streaming" and "Video Games Consoles and Accessories," which presides over an entertainmentcentric approach towards digital advertising. Website 2 performs well at "Search Engines" and "Coupons

and Rebate", which means it is highly likely to target on search engine ads and coupon promotions, for Website 3, it is high likely to be related to entertainment, especially, streaming services. Every brand has an opportunity to fine-tune its approach by exploring the channels and content types that generated high engagement even deeper to ensure that their content gets to the right audience effectively.

Fig. 6 shows a competitive analysis of social media referral traffic for Mobile websites while Fig. 7 displays ad visits data for various publishers.



Figure 6: Competitive Analysis of social media referral



Figure 7: AD visits

## **4.10 Customer Support**

Website A provides chat, email and phone support, mostly giving positive reviews about effective communication as Website B also provides support over phone and email but the response time is not always positive. It also provides an extensive FAQ page, which may seem rather general for some users. According to the type of furnishing, Website C has a chat support.; there is immediate support available for the users and FAQ section which incorporates the guidelines of the users for improving the Website C services making users a part of the community.

#### 4.11 Community and User Engagement

The data in Fig. 8 reveals the traffic share distribution across different countries, highlighting the global reach and user engagement of the platform. India leads with a substantial 19.08% traffic share, suggesting strong user engagement and a significant community base from this region. The United States follows with 15.79%, indicating active participation from North America. Brazil, Italy, and Germany also contribute notable traffic shares at 7.82%, 6.23%, and 4.39%, respectively, reflecting a diverse international user base. This distribution suggests the platform's appeal across various geographies, with India and the United States being primary contributors to its online presence and community engagement.



Figure 8: Traffic shares by different Countries

#### 4.12 Metrices

This comparison of three Mobile Websites shows that each has unique characteristics in terms of the identified performance indicators. Website 2 is the most visited with a monthly unique visitors of 895.8 million and total page views amounting to 2.178 billion. However, Website 1 has the main advantage shown in the visitors' average time spent on the site of 2:47 which proves guests' interest in Website 1 content. However, Website 3 with the least number of monthly visit and page view has a higher number of pages per visit 4.24 and the least bounce rate of 30.32% which shows that users are more engaged on this website. These are shown in terms of traffic in Fig. 9 where Website 2 has the upper hand, bounce rate in which Website 1 has the lower rate, and session per user in which Website 3 has a higher rate.

| Merc                    | • sobriet  | Mission 2 | • Webcard |
|-------------------------|------------|-----------|-----------|
| Monthly visits          | 546.8M     | 895.8M +  | 6.766M    |
| Monthly unique visitors | N/A        | N/A       | N/A       |
| S Vots/Unquevisitors    | N/A.       | N/A       | N/A       |
| (i) Volt dynation       | 00:02:47 🐈 | 00:01:44  | 00:01:28  |
| Ø Pages per visit       | 3.37       | 2.43      | 4.24 🕈    |
| ≤ towere                | 50.16%     | 36.29%    | 30.32% *  |
| @ Page Views            | 1.8408     | 2.1788 *  | 28.6944   |

Figure 9: Comparison of Key Performance Metrics Across Mobile Websites: Website A, Website B, and Website C

# 5 CONCLUSION AND FUTURE WORK

Website 1 is suitable for users who want to get a perfect, smooth experience with the focus on privacy and uniformity. Because of its emphasis on quality and ease of use, it attracts the users who are concerned about company's image and protection. Website 2 has a broad customer base because of the wide products and services offered as well as the unique designs that appeal to the advanced and the basic users of the devices. Its security aspect and marketing plan make it suitable for almost any age group and ranks it high in user preference. Website 3 offers affordable premium devices, good UX, and a focus on the community which will attract mature, technologyoriented, cost-conscious consumers who like to be involved in the development. It has been able to create a brand that appeals to the younger more technologically inclined users who are looking for a quality service at an affordable price.

The following research could expand on the effects of new technologies such as AR, AI, and VR for each platform's user interface and device functions. Furthermore, reviewing environmental sustainable activities that firm adopts including material acquisition, recycling initiatives, and carbon footprint would provide meaningful information on how each brand respond to green consumption attitudes. Another avenue is privacy since the various geographies have their data protection laws; knowing how each of the platforms handles laws such as GDPR and CCPA would help in getting an understanding of the level of data protection. Finally, examining the stability and the rate of user inertia regarding these platforms as well as loyalty after the extensive introduction of new products and following the changes in users' preferences - this would enhance understanding how such platforms evolve and remain interesting and relevant on the market.

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