HANIF
Journal of Information Systems
https://journal.ilmubersama.com/index.php/hanif

Click here and write your Article Category

SEO (Search Engine Optimization) Finding Growth Opportunities in Organic Traffic

Yoga Pramana [1], Halim Maulana [2]

[1] *Department of Information Technology, Faculty of Computer Science and Information Technology, Universitas Muhammadiyah Sumatera Utara, Medan, 20238, North Sumatra, Indonesia*
[2] *Department of Information System, Faculty of Computer Science and Information Technology, Universitas Muhammadiyah Sumatera Utara, Medan, 20238, North Sumatra, Indonesia*

ARTICLE INFORMATION

Received: February 00, 00
Revised: March 00, 00
Available Online: April 00, 00

KEYWORDS

digital marketing services; SEO; online brand visibility.

CORRESPONDENCE

Phone: +6282176060541
E-mail: yhoga5454@gmail.com

A B S T R A C T

The rapid growth in digital marketing highlights the importance of Search Engine Optimization (SEO) in enhancing website visibility and attracting organic traffic. This research focuses on SEO optimization for Kaia Media.id by developing a dedicated Keyword Tool Suggestion application. The primary goal is to identify opportunities to increase organic traffic to the Kaia Media.id website by efficiently targeting relevant keywords. The developed tool helps discover high-potential keywords that align with the interests and search behavior of the target audience. The Keyword Tool Suggestion application provides an easy-to-use interface to generate effective keyword suggestions based on current trends and search engine algorithms. By integrating this tool into Kaia Media.id's SEO strategy, the website can improve its search engine ranking, attract more visitors, and ultimately enhance its online presence. The application is tested to ensure that it provides accurate and actionable keyword suggestions, facilitating more effective content creation and marketingstrategies. By leveraging the Keyword Tool Suggestion application, Kaia Media.id aims to position itself as a leading digital marketing agency, offering high-quality SEO and online marketing solutions to its clients. The findings of this research affirm the value of targeted keyword optimization in achieving sustainable growth in organic traffic.

INTRODUCTION

In the ever-evolving digital economy 4.0, a business or entity's online presence is key to achieving success and resilience in a competitive marketplace. This strategy involves various platforms, including Google Ads, Facebook Ads, and TikTok Ads. For example, the Google Ads platform focuses on marketing all Google products, including YouTube, Search, and Display. Vice versa. One crucial element in building a strong online presence is the ability to leverage search engines and improve rankings in search results. Search Engine Optimization (SEO) is an essential strategy to achieve this goal[1,2,3].

Kaia Media.id is a Creative Digital Agency, which operates in the field of digital marketing, namely a start-up that sells Website Creation services, SEO (Search Engine Optimization) Services, Social Media Marketing for all business people in Indonesia. Kaia Media.id's digital sales activities use Marketing platform media to convey the latest news in the form of selling services or product services so that marketing is more optimal. Kaia Media.id only reaches new customers to convey a promoted service. So that the Kaia Media.id website gets organic traffic from search engines. Regarding service promotion, Kaia Media faces challenges in maintaining and increasing organic traffic on their website. Although Kaia Media has made various digital marketing efforts, organic traffic still shows significant fluctuations [4,5].

https://doi.org/10.12345/xxxxx

This was due to the lack of a focused strategy on proper keyword optimization and in-depth data analysis to attract relevant visitors. Here, Kaia Media faced challenges in identifying the most effective keywords and understanding visitor behavior to improve their website's visibility in search engines. Kaia Media also offers a variety of services, including SEO, website development, social media marketing, advertising, content creation, and brand activation. However, with this wide variety of services, the information presented to potential customers is often unfocused and confusing. Potential customers may not easily find the services they need, leading to lower conversion rates and decreased organic traffic. Therefore, a structured strategy is needed to optimize keyword usage and attract the right visitors.

The main problem Kaia Media faces is its inability to maximize the use of relevant, high-potential keywords to drive organic traffic. Without an effective SEO strategy, Kaia Media's website may not appear on the first page of search results, reducing its chances of being discovered by potential customers. Furthermore, without a solid understanding of search trends and visitor behavior, it's difficult to tailor content that can increase engagement and conversions.

METHOD

SEO

Search Engine Optimization (SEO) is a series of techniques used to improve a website's visibility and ranking in search engine results such as Google, Bing, and Yahoo. The primary goal of SEO is to make a website more easily found by users searching for information or products relevant to specific keywords.
[6,7] SEO plays a crucial role in modern digital marketing. With the majority of internet users using search engines to find information and products, appearing on the first page of search results is key to increasing website visibility and traffic.

Understanding the factors that influence organic traffic to a website is crucial in the context of SEO. First, content quality is a key factor influencing organic traffic. Informative, relevant, and high-quality content tends to attract users' attention and receive more shares and links from other websites, ultimately increasing organic traffic[8,9]. SEO encompasses various aspects, from optimizing content and website structure to link building and optimizing other technical factors. SEO strategies and techniques are key to improving a website's visibility and ranking in search engine results. First, on-page optimization involves optimizing elements directly within the website. This includes using relevant keywords in content, page titles, and meta descriptions, as well as building an SEO-friendly URL structure [10,11].

Off-Page and On-Page

States that off-page optimization, in the context of SEO, refers to a series of strategies implemented outside the website itself to improve the website's authority, reputation, and visibility in search engine results. One key aspect of off-page optimization is building quality links, or backlinks, which are links that lead from other websites to the target website. Backlinks are considered "votes" or recommendations from other websites, and search engines like Google consider them an important factor in determining a website's ranking in search results [12]. Promotion is a mainstay of every company to offer loyal customers so that they will repurchase the product. With a well-thought-out strategy, promotion can significantly increase sales. Through this research, the author has a different perspective on the definition of promotion.

In addition to link building, off-page optimization strategies also include content marketing activities aimed at increasing the distribution, visibility, and engagement of website content across various online platforms. Content marketing involves sharing quality, relevant content through social media, guest blogging, news sites, and more. Through effective content marketing, websites can acquire more natural backlinks, increase organic traffic, and build authority and reputation within their industry. Furthermore, social media engagement is also a crucial off-page optimization strategy. Social media activity can help increase content exposure, build engagement with target audiences, and acquire more social backlinks. By actively interacting with users, sharing quality content, and networking with stakeholders, websites can expand their reach.

RESULTS AND DISCUSSION

Application Testing

Testing the "Keyword Tools Suggestion" application is a crucial step to ensure that the application functions as expected and provides accurate results to users. Testing began by verifying the application's core functionality: its ability to retrieve keyword suggestions from various search engines, including Google, Bing, Yahoo, and YouTube. For each search engine, we tested whether the application could send correct requests, receive the expected responses, and correctly display suggested keywords within the user interface.

Next, we tested the user interface to ensure that elements such as the input form, the "Start Searching" button, and the search results display functioned properly. We also ensured that users could easily select their desired search engine and enter keywords. The interface's responsiveness was also tested across various screen sizes to ensure the application could be used comfortably on both desktop and mobile devices.

In our testing, we found that the "Keyword Tools Suggestion" app has several areas for improvement. One such area is optimization for AJAX requests, which could be improved to reduce user wait time. Furthermore, error handling needs to be improved so that users receive more informative messages when network errors occur or when the search engine doesn't return results. Overall, the app functions well and fulfills its primary purpose, but further improvements would help improve the overall user experience.

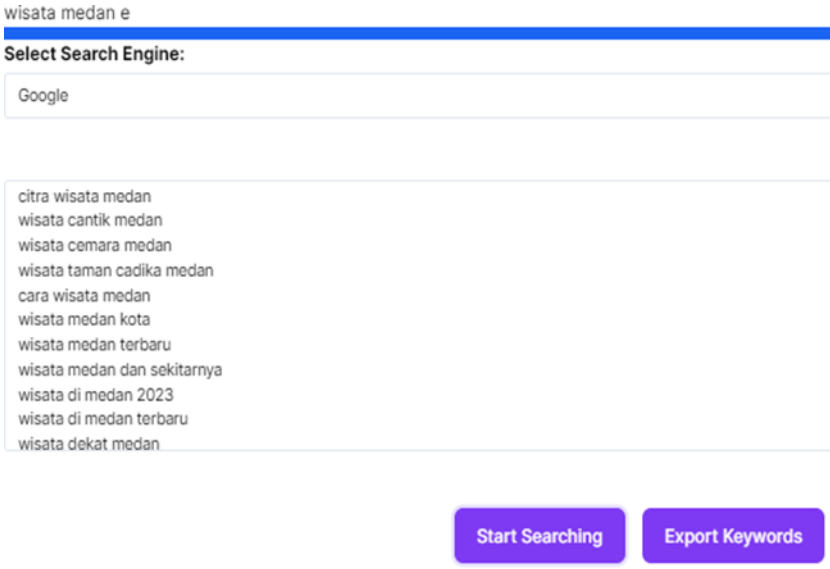

Figure 1. Query Keyword Generation Process

Dashboard Page View

The dashboard page is the first page displayed before entering the application created by the author. The dashboard page includes a "Select search engine" and a search engine dropdown menu, as well as a "Start searching" and "Export keyword" button that directs you to the total keyword results generated after the author's application has completed generating results.

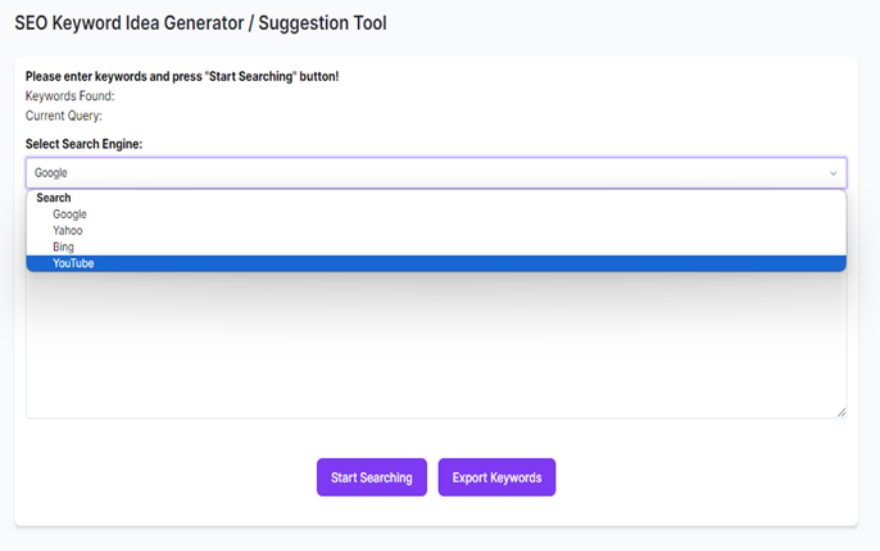

Figure 2. Dashboard Page View

Keyword Generation Process Page View

On the keyword generation process page, users will see an interface designed to make it easy to start their keyword search. This page displays a form where users can enter the initial keywords they wish to explore further. They can also choose which search engine to use, such as Google, Bing, Yahoo, or YouTube. After clicking the "Start Searching" button, users can view the search progress in the form of a progress bar indicating the number of keywords found so far. Furthermore, this page displays the keywords being processed in real-time, providing transparency and allowing users to easily monitor the progress of the search process.

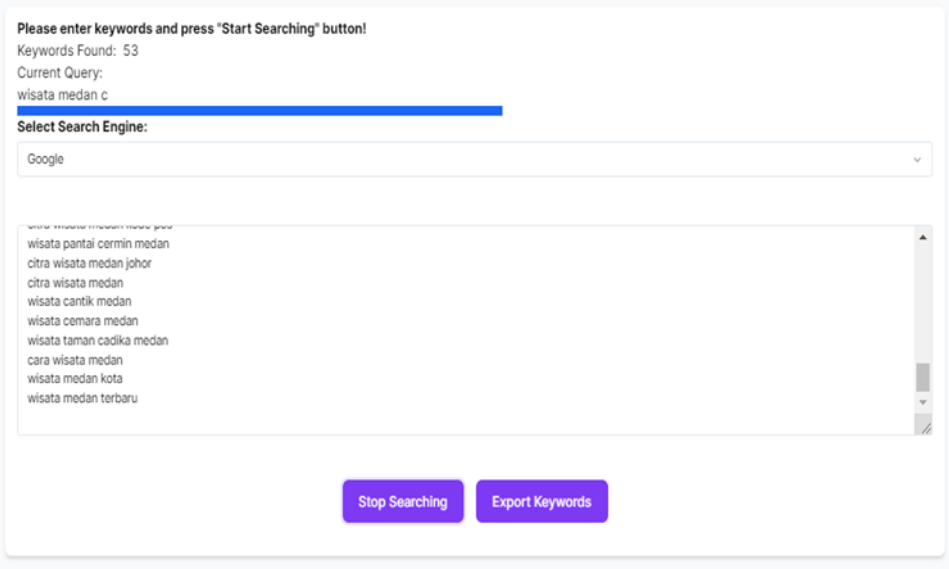

Figure 3. Keyword Generation Process Page View

Export Keywords Page View

On the export keywords page, users can save the keyword search results generated by the application. Once the keyword generation process is complete, users can view a list of the keywords found in a text area. On this page, there is an "Export Keywords" button that allows users to copy all the keywords found. This feature is very useful for making it easier for users to collect and use these keywords for further analysis or SEO purposes.

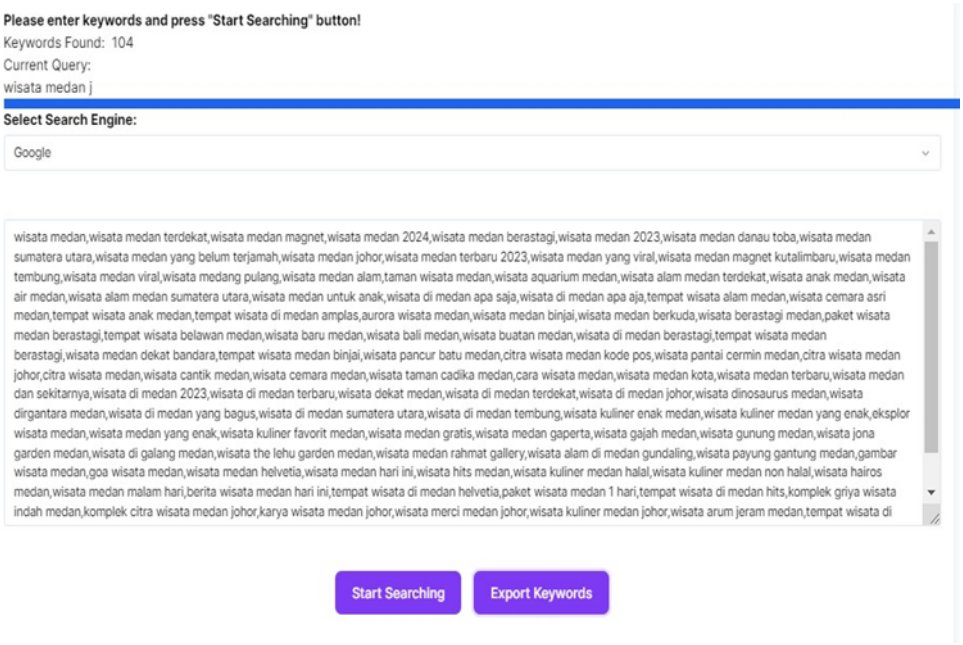

Figure 4. Export Keywords Page View

Stop Keyword Page Display

On the Stop Keyword page, users can stop the ongoing keyword search process. This page provides information on the current search status, including the number of keywords found and the last keyword being processed. By pressing the "Stop Searching" button, users can quickly stop the search activity, and the application will display a confirmation message that the search has been stopped. This feature is designed to give users full control over the keyword search process, allowing them to stop the search at any time if they feel they have obtained enough results or if they wish to change their search strategy.

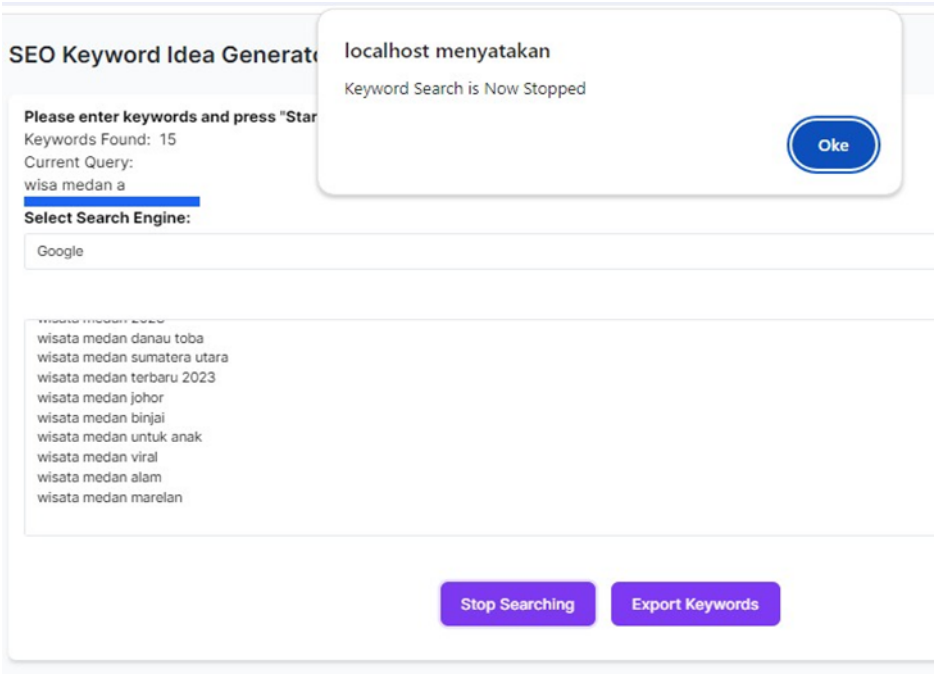

Figure 5. Stop Keyword Page Display

Testing

Testing is an evaluation process aimed at determining the quality, performance, or reliability of an application. In this context, testing is conducted to assess the effectiveness of the "Keyword Tools Suggestion" and identify potential issues that may arise.

This testing can be conducted using various methods, including user surveys, interviews, direct observation, and experiments on application usage. The purpose of this testing process is to evaluate the current system and ensure its performance meets expectations. To test the quality and usefulness of the "Keyword Tools Suggestion" and to identify potential weaknesses in the current system, testing is a crucial part of the application development process. Testing helps ensure that the application is high-quality and effectively meets user needs. Furthermore, testing can help identify potential issues early so they can be addressed before the application's official release.

Testing involves various usage scenarios, where users are asked to enter keywords and execute application features, such as keyword search and export. The results of this testing are evaluated to ensure that all features function properly and provide accurate and useful results to users. This testing process also included an assessment of the user interface to ensure the application was easy to use and intuitive.

Overall, the "Keyword Tools Suggestion" testing focused on ensuring that the application provided significant added value to users in managing and discovering relevant keywords for SEO purposes. By conducting thorough testing, developers could ensure that the application not only functioned well but also met the quality standards expected by users.

CONCLUSION

Search Engine Optimization (SEO) remains one of the most effective long-term digital marketing strategies for increasing organic traffic, improving website visibility, and creating sustainable business growth. This study demonstrates that identifying growth opportunities through comprehensive keyword research, high-quality content development, technical SEO optimization, on-page improvements, off-page authority building, and continuous performance monitoring significantly enhances a website's ability to attract targeted visitors. Rather than relying solely on paid advertising, organizations can achieve consistent and cost-efficient traffic growth by aligning SEO strategies with user search intent, search engine algorithms, and website usability. These findings are consistent with previous studies showing that website quality, authority, and brand awareness positively influence organic search performance and user engagement.

Furthermore, the research highlights that successful SEO should be viewed as an ongoing optimization process rather than a one-time implementation. Regular analysis of search trends, competitor strategies, user behavior, and website analytics enables organizations to identify emerging opportunities and adapt to the continuously evolving search ecosystem. As artificial intelligence increasingly influences search experiences through AI-generated answers and semantic search, integrating traditional SEO with AI-oriented optimization practices will become increasingly important for maintaining organic visibility. Overall, this study provides both theoretical and practical contributions by presenting a comprehensive framework for discovering organic traffic growth opportunities through SEO. The proposed approach can assist businesses, digital marketers, e-commerce platforms, educational institutions, and content publishers in developing sustainable online visibility strategies while improving user experience and long-term search engine performance. Future research may extend this work by integrating machine learning-based SEO prediction models, user behavior analytics, Generative Engine Optimization (GEO), and Answer Engine Optimization (AEO) to evaluate their combined impact on organic traffic growth in AI-driven search environments.

REFERENCES

Book: Single Author
[1] Indah Purnama Sari. Buku Ajar Algoritma Dan Pemrograman, 2023. UMSU Press
[2] Indah Purnama Sari. Buku Ajar Pemrograman Internet Dasar, 2022. UMSU Press.
[3] Indah Purnama Sari. Buku Ajar Rekayasa Perangkat Lunak, 2021. UMSU Press

Book: Two or More Authors
[4] Muharman Lubis Ilham Firman Ashari, Debby Erce Sondakh, Rahmawati Rolly Junius Lontaan, Mustarum Musaruddin Indah Purnama Sari, Muh. Nadzirin Anshari Nur, Hanalde Andre Muh. Rais, Janner Simarmata. Internet of Things (IoT) Dan Multimedia : Integrasi dan Aplikasi, 2024. Yayasan Kita Menulis, 182

[5] Mahdianta Pandia, Indah Purnama Sari, Alexander Wirapraja Fergie Joanda Kaunang, Syarifah Fitrah Ramadhani Stenly Richard Pungus, Sudirman, Suardinata Jimmy Herawan Moedjahedy, Elly Warni, Debby Erce Sondakh. Pengantar Bahasa Pemrograman Python, 2024. Yayasan Kita Menulis, 180
[6] Surya Wisada Dachi & Indah Purnama Sari. Aplikasi Komputer, 2024. UMSU Press

Journal Article from the Internet
[7] Antonius, A., & Suteja, B. R. (2021). The Implementasi Metode On-Page Search Engine Optimization untuk Meningkatkan Peringkat Website sebagai Hasil Pencarian Google. Jurnal Teknik Informatika Dan Sistem Informasi, 7(1), 251– 260. https://doi.org/10.28932/jutisi.v7i1.3428
[8] Arifin, A., Dengen, N., Setyadi, H. J., Prafanto, A., & Putra, G. M. (2019). Analisis Penerapan Metode Search Engine Optimization (SEO) Untuk Meningkatkan TrafficWebsite Berbayar dan Tidak Berbayar. Prosiding Seminar Nasional Ilmu KomputerDan Teknologi Informasi, 4(2), 20–49.
[9] Sari., I.P, Batubara., I.H, Al-Khowarizmi., A, & PP Hariani. (2022). Perancangan Sistem Informasi Pengelolaan Arsip Digital Berbasis Web untuk Mengatur Sistem Kearsipan di SMK Tri Karya. Wahana Jurnal Pengabdian kepada Masyarakat 1 (1), 18-24
[10] Habibi., F, Qathrunada., I.F, & Anggraini., T. (2023). "Design and Build a Tourism Website Using Shopify Framework". Hanif Journal of Information Systems. Vol. 1 No. 1, 2023.
[11] Sari., I.P, A Syahputra, N Zaky, RU Sibuea, & Z Zakhir. (2022). Perancangan sistem aplikasi penjualan dan layanan jasa laundry sepatu berbasis website. Blend sains jurnal teknik 1 (1), 31-37
[12] Sari., I.P, A Azzahrah, FQ Isnaini, L Nurkumala, & A Thamita. (2022). Perancangan sistem absensi pegawai kantoran secara online pada website berbasis HTML dan CSS. Blend sains jurnal teknik 1 (1), 8-15
[13] Sari., I.P, A Jannah, AM Meuraxa, A Syahfitri, & R Omar. (2022). Perancangan Sistem Informasi Penginputan Database Mahasiswa Berbasis Web. Hello World Jurnal Ilmu Komputer 1 (2), 106-110.
[14] Zulherry, A., Riadi, I., & Umar, R. (2026). Anomaly Detection in Cloud Device-Based Information Technology Infrastructure Using Isolation Forest Algorithm. Journal Of Informatics And Telecommunication Engineering 9 (2)
[15] Sari, I.P., & Zulherry, A. (2025). Development of A Smart Monitoring System for IoT–Based Tide Observation. Al'adzkiya International of Computer Science and Information Technology (AIoCSIT) Journal, 6 (2), 18-23
[16] Zulherry, A., Gunawan, M., & Sari, I.P. (2025). Development of an Android-Based Smart Health Monitoring Device for Heartbeat Detection. Al'adzkiya International of Computer Science and Information Technology (AIoCSIT) Journal, 6 (2), 43-47
[17] Sari, I.P., Zulherry, A., Basri, M., & Hayani W. (2025). Pembelajaran Pemrograman berbasis Machine Learning sebagai Upaya Peningkatan Computational Thinking. Jurnal Penelitian, Pendidikan dan Pengajaran: JPPP 6 (3), 245-250
[18] Bisono, A. T., & Zulherry, A. (2025). Analisis sentimen game Genshin Impact untuk mengetahui reaksi dan harapan pemain menggunakan metode Naïve Bayes. sudo Jurnal Teknik Informatika, 4(2), 183-193.
[19] Basri, M., & Zulherry, A. (2025). Analysis of the Impact of Gambling and Online Loans in the Perspective of Informatics, Islam, and Kemuhammadiyahan. Ar-Rasyid: Jurnal Pendidikan Agama Islam, 5(1), 65-73.
[20] Asadel, A., & Zulherry, A. (2025). Detecting Zero-Width Characters Obfuscated in Phishing URLs using the XGBOOST Algorithm. Hanif Journal of Information Systems 3 (1), 43-53
[21] Zulherry, A., Sari, I.P., & Basri, M. (2025). Perancangan Aplikasi Monitoring Kehadiran Pegawai Menggunakan RFID. sudo Jurnal Teknik Informatika 4 (4), 378-384
[22] Sari., I.P, & Batubara., I.H. (2021). Perancangan Sistem Informasi Laporan Keuangan Pada Apotek Menggunakan Algoritma K-NN. Seminar Nasional Teknologi Edukasi dan Humaniora (SiNTESa) 1 (2021 - ke 1
[23] Ramadhani., F, A Satria, & Sari., I.P. (2022). Aplikasi Internet Berbasis Website sebagai E-Commerce Penjualan Komponen Sport Car. Blend Sains Jurnal Teknik 1 (2), 69-75
[24] Ichsan, A., Zulherry, A., Lubis, T. A., & Shahnaz, B. A. Z. (2025). Utilization of Mobile Applications to Speed Up The Search for Android-Based Index Places. IJATCoS: Indonesian Journal of Applied Technology. Computer and Science, 2(1).
[25] Amada, E.P., & Zulherry, A. (2025). Klasterisasi Minat Dan Bakat Siswa Menggunakan Metode X-Means Berbasis Web: Studi Kasus SMA Negeri 1 Hamparan Perak. sudo Jurnal Teknik Informatika 4 (4), 276-283.
[26] Zulherry, A., Ramadhani, F., & Satria, A. (2024). Klasifikasi Data Tracer Study Dengan Pemanfaatan Data Mining Menggunakan Algoritma Support Vector Machine dan Neural Network. Portal Riset dan Inovasi Sistem Perangkat Lunak 2 (1), 45-54
[27] Zulherry, A. (2023). Decision making for network security with simple additive weighting method. Journal of Intelligent Decision Support System (IDSS), 6(3), 155-159.

[28] Zulherry, A., Gunawan, T. S., & Wanayumini, W. (2021). Analisis Hasil Pendukung Keputusan Mendapatkan Rumah Dinas Perusahaan Menggunakan Metode Analytical Hierarchy Process (AHP) dan Technique for Order Preference by Similarity to Ideal Solution (TOPSIS). Jurnal Media Informatika Budidarma, 5(2), 695-704.

[29] Sari., I.P, & Batubara., I.H. (2021). User Interface Information System for Using Account Services (Joint Account) WEB-Based. International Journal of Economic, Technology and Social Sciences (Injects), 462-469

[30] Sari., I.P, Sulaiman., O.K, & Apdillah, D. (2024). Rancang Bangun Game Zombie Menggunakan Kodular Berbasis Android. Jurnal Minfo Polgan 13 (1), 293-302

[31] Ichsan., A, Siambaton., M.Z, & Nasution., K. (2023). "Android-Based Practical Work Student Registration Form Application System Design". Hanif Journal of Information Systems. Vol. 1 No. 1, 2023.