

Feasibility Study for Developing an Event Prioritizing System Using CMSs

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Abstract: A content management system (CMS) is software that lets users make, modify, publish, and save digital information. These systems provide a piece of software called a plugin, model, or extension that plugs into users' sites and add new functionality or extends existing functionality on the user site. In current events, prioritization is done manually. When changes in event attributes like personnel, logistics, or money happen after the hand-prioritized list of activities is completed, it is not an easy task to reprioritize. By developing an event prioritization plugin, the organizations in need will use it and reduce time and money consumption. This study aims to recognize and evaluate the existing CMSs, their domains, and available plugins. Assess the availability of event prioritization plugins and recommend developing a plugin to help charity organizations to select the best team and resources and conduct the events effectively. The search is done in the area of the developed research questions. Search phrases containing pertinent keywords were used to find primary studies linked to CMSs categorized under journal articles, conference papers, seminars, symposiums, book chapters, and related CMSs websites.

Keywords: Artificial Intelligence (AI), Bitrix, Content management systems (CMSs), Drupal, Extension, Event management, Joomla, OpenCart, Prioritization, Plugin, PrestaShop, Shopify, Squarespace, WordPress, Wix, Webflow.

1. Introduction

The business of organizing events for other organizations is known as event management. In rare cases, the attendees and the event's logistics may come from several organizations in addition to the organizers' organization. There are many different events, including opening ceremonies, business events, seminars, brand promotions, Etc. Event planning is a science as well as a culture and social life [11][57].

Several organizations have planned and produced festivities like local product festivals, community fairs, or sporting events to draw locals and visitors. [13][19][20][33] Moreover, the event industry provides communities with economic and social benefits. An event is a pre-arranged occasion or activity, such as a social gathering [17]. Alternatively, a gathering of individuals is organized for a specific reason, such as a party, conference, trade show, or meeting [18]. People attend significant sports events in large numbers, especially large-scale ones, and any organization errors arouse all the media due to the high number of people watching worldwide [8].

Event management is a part of project management, although event management has its distinct concepts and problems. As a result, it requires more advanced techniques, instruments, and algorithms. Determine the best staffing, logistics, and budget for the event; monitor changes to the budget and scheduled activities; and, as a problem, fail to prioritize related tasks. At the moment, event management is done manually in the organization. When changes

in event attributes like personnel, logistics, or money happen after the hand-prioritized list of activities is completed, it is not an easy task to reprioritize [11].

Another difficulty in event management is time management, which is very important. There is no way to prepare for each event because planning some events is like scaling different-sized mountains, some of which are enormous and some small. Without beginning the voyage, it is impossible to estimate how long it will take. Therefore, getting things going as soon as possible is crucial to avoid having the event's quality suffer [6]. Charity organizations organize sports events and auctions to fundraise for their activities, and people can attend these events and support them [72].

Prioritization is a technique that ranks decisions and actions (which are the attributes) according to their relative relevance to other comparable attributes to organize the events [28]. It is the determination of the significance or relevance of actions required to maintain the significance of the product produced or even the process for producing the product in the context of evaluating a decision being made [28]. One of the crucial roles in a prioritization process is that of a stakeholder. Different stakeholders may influence different decisions and priorities for activities. That is because stakeholders decide the relative comparison and weight of attributes based on their perspective and authority. Researchers and practitioners have concentrated heavily on prioritization techniques, including Cumulative Voting (CV), Numerical Assignment (NA), Analytical Hierarchy Processing (AHP), and Analytical Network Processing (ANP), but it is highly dependent on stakeholders. Scalability is where CV and NA are good, whereas AHP is best in precision. When interdependency and outer dependence are present as qualities, ANP is more noticeable when compared to AHP. However, both have poor

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scalability [78]. As a result, proper data arrangement of the event attributes for hierarchical criteria is required.

A content management system (CMS) program enables users to create, edit, organize, and publish digital information. Any business can utilize it, but small businesses can benefit significantly from using CMSs to develop and organize content without technical knowledge or a big budget [62]. As a result, creating an event prioritization plugin for a CMS will help the organization to determine what kind of event is most appropriate to be conducted by making use of all resources (goods, people & services) available in the charity-based organization. It is affordable for nonprofit organizations to manage their workload and data using an open-source content management system (CMS). Therefore, CMS is considered one of the best tools for developing customized systems, including event management requirements.

This study aims to review existing literature on CMSs, the domains and advantages of these CMSs, and the available plugins; we try to discover the AI plugins and their reputation and success on the market. How does developing an event prioritization system or application benefit from these AI plugins? In order to gain a concept for future work, which involves creating an Events prioritizing plugin, Charity organizations will use the proposed plugin to select the volunteer team and the resources required to conduct an event.

The remainder of the review is structured as follows: The research methodology is described in Section II, the research technique is represented in Section III, and the findings are presented in Section IV. In Section V, we examine and evaluate recent research to pinpoint knowledge gaps and propose opportunities and approaches for future research. The paper is concluded in Section VI.

2. Research Method

The strategy suggested by [42] was used to conduct this research see Fig 1. The six phases of the review protocols are as follows, with reference to Fig 1: research questions, search strategy design, data extraction findings, scrutiny, quality assessment criteria, and data synthesis. Based on the goal of this study, a series of research questions were created in the first phase.

The development of search techniques, which included selecting search terms and literature resources, was done in the second phase in accordance with the developed study questions. The collation of extracted data was the focus of the third phase. In contrast, the fourth phase was dedicated to improving extracted data by examining the titles of the collated studies to ensure relevancy. The studies were assessed using the quality assessment criteria in the fifth step, and the final studies were chosen for analysis and action in the sixth phase.

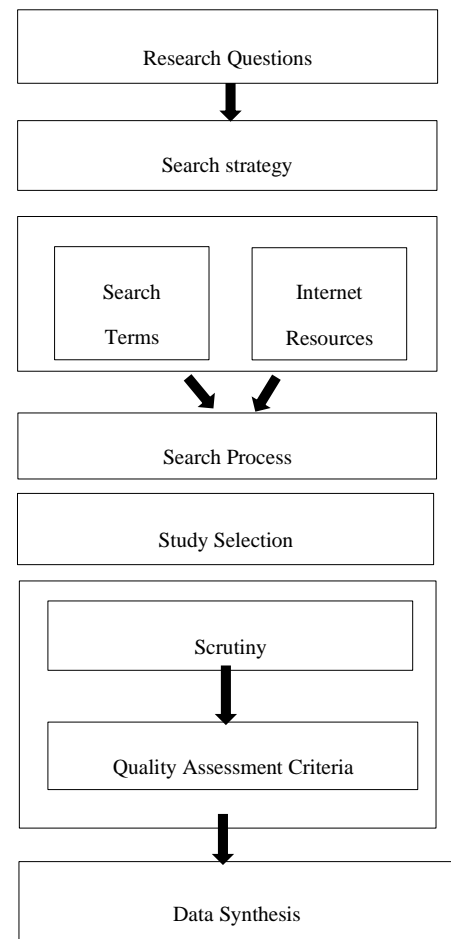


Fig 1. Phases of the review

2.1. Research questions

This SLR intends to analyze the existing literature on CMSs, their domains, and their benefits. It also examines the various plugins, including event management plugins, and tries to learn more about the reputation and market success of AI plugins. What are the advantages of using these AI plugins while creating an event prioritization system or application? To get an idea for future work, which entails developing an Events prioritizing plugin, consider the following: charity organizations will use this plugin to carry out their duties automatically rather than manually, and it will assist in selecting the appropriate resources and volunteers to conduct an event. Four research questions (RQs) were created to accomplish this goal, and they are listed below:

- **RQ1:** which CMSs is mainly used by people five years back?
- **RQ2:** What are the domains and advantages of these CMSs?
- **RQ3:** What are the plugins and templates provided for specific system functions?
- **RQ4:** What are the AI-based plugins in the market?

2.2.1. Search strings

The search terms were created using the procedures listed below [42]:

- (a) The primary terms' derivation from the study questions.
- (b) Listing different ways to spell key terms and their synonyms.

- (c) Finding relevant articles' or books' keywords.
- (d) Using the Boolean OR to consider different spellings and synonyms.
- (e) Using the Boolean AND operator to connect the key terms.

The repositories were searched using the following strings: Event management prioritization AND (Plugin / OR Extension /OR Module), CMSs AND (Compare /OR WordPress /OR Joomla /OR Drupal /OR Wix /OR Squarespace/ OR Bitrix /OR Webflow /OR OpenCart /OR Plugins /OR Extensions /OR Modules /OR AI plugins).

2.2.2. Literature resources

This study mainly extracted synchronization data from the following electronic database resources. These include Google Scholar, ScienceDirect, IEEE Xplore, Springer, and other journals and websites. The search criteria used to find published journal papers, conference proceedings, symposiums, book chapters, and IEEE bulletins were title, abstract, and index terms.

2.2.3. Search process

A systematic literature review thoroughly searches all pertinent materials related to a discussion topic. Step (1)of the search electronic database sources were thoroughly searched, and the returning results (papers) were compiled into sets of potential papers. Step (2)of the search involved looking through

all relevant papers' reference lists for any other papers that might be pertinent, then combining those papers, if any, with those found in step (1).

2.3. Study selection

In the first stage, 157 prospective studies were accomplished. The titles of these research were then scrutinized and used to compile relevant studies. This activity was required to get rid of research that was redundant and unnecessary.

The 157 articles were subjected to the quality assessment criteria and the research questions. As a result, 71 pertinent studies were chosen, selected, and considered qualified to offer solutions to the posed research questions.

2.3.1. Scrutiny

In the initial search, prospective studies were found. So, careful consideration was required to narrow down this research to those that were pertinent. Each study's title was considered before its contents were quickly examined. As a result, publications that do not answer any of the proposed study questions or do not reflect the subject of discussion were removed from the list of relevant studies. Additionally, Only English-language studies were taken into consideration for the list of relevant studies.

Table 1. Inclusion and exclusion criteria.

| Inclusion Criteria | Exclusion Criteria |
|--|--|
| a. Articles about Content management systems. b. Articles about top-rated plugins or extensions or modules. c. Articles about AI plugins and their functionality. d. Every article published is in English. | a. Articles presenting new CMS b. Articles about uncommon CMS c. Articles about new plugins d. Articles that did not match the inclusion criteria e. Papers that are not in English. |

Fig 2. Quantity and proportion of collected studies

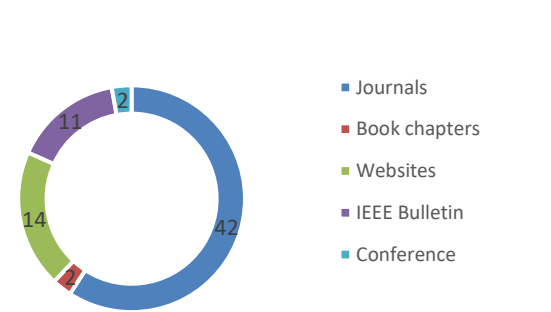
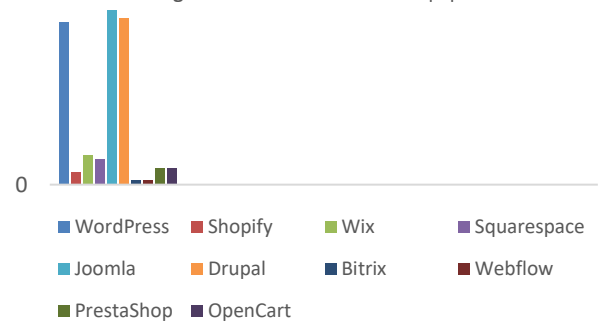


Fig 3. CMSs cited in the review papers



Peer-reviewed journals, conference papers, seminars, book

chapters, and IEEE bulletins were the sources for these investigations. However, only the most complete, up-to-date, and improved document copy is used in the search, leaving the older versions out when several versions of the same paper are found. Our review targeted peer-reviewed articles about CMSs published between January 1, 2017, and May 1, 2022. Only articles in English were included. Table 1. include the inclusion and exclusion criteria we followed during this review.

2.3.2. Quality assessment of the chosen studies

The quality assessment (QA) of the chosen studies was attained using scoring methods to identify relevant papers that might answer each research question. If the article offers solutions to any research questions, the answer is "Yes," and the score equals one. If none of the research questions are addressed in the article, then the answer is "No," the score is zero, then the score is calculated by summing the scores for the four research questions and the articles arranged in descending order.

2.4. Data synthesis

Data synthesis aims to handle or answer the research questions by condensing the evidence from the chosen studies. This exercises' goal is to synchronize the chosen studies to improve clarity. Additionally, it will make it easier to find accurate responses to the research questions. Both quantitative and qualitative data were included in the extracted data for this study.

3. Results and Discussion

The results of this review are presented and discussed in this section. We begin by providing a summary of the chosen studies. Secondly, we thoroughly describe the review's conclusions in each subsection in light of the research questions. This section also provides an interpretation of the review findings.

3.1. A summary of selected studies

For this investigation, 71 studies were chosen, 42 were published in journals, 2 conference papers, 2 from book chapters, and 14 websites were visited, among them the websites of the CMSs selected in this paper and 11 from IEEE Bulletin. These numbers are presented in Fig 2. Furthermore, Fig 3. shows the CMSs cited in the review papers.

3.2. which CMS is mainly used by people five years back? (RQ1)

This research aims to study the CMS systems and their market share in the last five years. It also aims to study these systems' functionality domains and their available plugins, focusing on Artificial Intelligence (AI) plugins. Firstly, CMS is a multiuser, server-based tool that interacts with repository-stored content. This repository could be located on the same server as a part of the same software or on a different storage facility.

The CMSs discussed in [54] mention that the three main types of CMS systems are open source, proprietary, and software-as-a-service (SaaS) CMS, including cloud-based systems.

The most popular CMS is open source because it can be

downloaded free and does not require a license or upgrade fees. WordPress, Joomla, Drupal, Magento, and PrestaShop are the most widely used open-source CMS [54].

Commercial CMS software, usually referred to as proprietary CMS, is created and maintained by a single firm and requires the payment of a license fee for the usage of the software as well as an annual or monthly fee for upgrades or maintenance. Choosing this CMS will depend on the stage of the website where it will be used. In contrast, if the CMS is going to be integrated into an already-existing website, it must be carefully picked as it must fulfill all needs right out of the box and could necessitate extensive backend development work. New websites should pick a CMS that meets their present functionality, flexibility, and future needs. Popular proprietary content management systems include Kentico, Pulse CMS, Sitecore, and Shopify [54].

SaaS CMS systems, which are hosted in the cloud and use a subscription-based business model, include content management software, web hosting, and technical support from a single provider. Pricing is often based on the number of users or sites and depends on how much data is transferred, stored, and supported continuously. The cloud CMS can be totally or partially cloud-based, and it can be chosen based on the needs of the business. Compared to fully cloud CMS, which is controlled by the supplier, is provided as part of a package or service, and is sometimes difficult to customize, partial cloud CMS is in the company's cloud webserver, giving more flexibility in changing the functionalities either with add-on modules or by changing the source code itself [54].

Other classifications of CMSs represented in [40] three CMSs types are as follows, commercial (paid), open source (free), or custom. Various options could be used to fulfill an organization's or project's objectives. As a result, Open Source and Custom CMSs are currently the most popular solutions among users, and there may be "more open-source possibilities accessible in CMSs than in any other genre of software." [9]. In [39], The results show that open-source content management systems are more widely adopted and used than other popular content management systems currently in use. Table 2. shows the share percentage of CMSs in the market during the past five years, from 2017 to 2021 [81].

In [44] author claims that the open-source CMS concept began to take shape around 2000, and by 2004, various CMSs had begun to develop distinctive features that suited the user's preferences. The CMS may be set up and operated on a web server. Innumerable adjustments can be made under company or individual requirements, including adding plugins, installing SEO tools, altering themes and layouts, Etc.

According to the primary studies, there are more than 141 content management systems (CMS) available, but few have more than a 1% market share. Each has its features, benefits, and drawbacks, but open-source CMS like Joomla, WordPress, and Drupal stand out due to qualities like usability, customization potential, support, security, adaptability, and the number of resources available (modules, components, and plugins)., This article shows the 10 most common CMSs in the market and their plugins, extensions, and components, which ease and provide the required functionality for a website.

The related work of CMSs involved comparing different CMSs. For example, [66] Concluded that Drupal, Joomla, and WordPress have different features, capabilities, flexibility, and user-friendliness. The UI of Joomla is pretty simple to use, allowing users to create websites with more content and structural solidity

than WordPress. If a customer wants a typical website with standard features like a blog, a static/dynamic front end, or a forum, Joomla is quite helpful. Joomla is a good option for small to midsize e-commerce sites, while Drupal is a better alternative if users need something more robust for

Table 2. Most popular CMSs and their share in the market

| CMS | 2017 1 Jan | 2018 1 Jan | 2019 1 Jan | 2020 1 Jan | 2021 1 Jan |
|-------------|---------------|---------------|---------------|---------------|---------------|
| WordPress | 58.5% | 60.0% | 59.7% | 62.1% | 64.1% |
| Shopify | 1.3% | 1.8% | 2.6% | 3.4% | 5.2% |
| Wix | 0.6% | 0.9% | 1.8% | 2.3% | 2.4% |
| Squarespace | 1.1% | 1.5% | 2.6% | 2.7% | 2.3% |
| Joomla | 7.2% | 6.5% | 5.4% | 4.6% | 3.6% |
| Drupal | 4.8% | 4.6% | 3.5% | 3.0% | 2.5% |
| Bitrix | 1.4% | 1.5% | 1.2% | 1.5% | 1.7% |
| Webflow | - | - | 0.2% | 0.2% | 0.4% |
| PrestaShop | 1.3% | 1.3% | 1.4% | 1.1% | 0.8% |
| OpenCart | 0.9% | 0.8% | 0.8% | 0.8% | 1.0% |

organizational use. WordPress is frequently described as a little CMS. Although not as strong or capable as Drupal or Joomla, it is still simple enough for any layperson to utilize. WordPress is a better CMS for people looking for a straightforward, user-friendly blogging solution that looks excellent and can easily accommodate numerous authors. Therefore, users should turn to Drupal first if they are creating a significantly more complex website. [2] Compare WordPress and Drupal as they both have significant market shares and are well-known among users, with WordPress being the more popular CMS.

At the same time, [10] compare CMSs and conclude that WordPress is the most user-friendly content management system, but it does not support substantial commercial websites like Joomla and Drupal. Drupal is also not intended for beginners and assumes that the user has intermediate-level programming knowledge. [41] says WordPress is a

leading content management system (CMS) rapidly draws clients requiring real-time data administration with variable outputs and large profits. [50] States Joomla has the most flexible system needs, whereas WordPress, Drupal, and Joomla all rank equally in terms of security. Typo3 delivers the best performance and can be very helpful for businesses that need to manage large amounts of material effectively. DotNetNuke outperforms the competition in terms of built-in features and plugins by providing the most built-in functionality. WordPress has the fewest management options, while Joomla offers the finest asset, advertising, and clipboard management.

However, [49] Claims that Web CMS is now used to implement over 50% of Internet web pages. The fact that they are designed for a vast audience and do not require advanced computer skills, as well as the fact that they provide a wide range of features, are two factors contributing to their success.

However, Due to its simplicity during installation, user-friendliness, intuitive interface, functionality, flexibility in adding new features as needed, open-source nature, the extensive development community, and availability of plugins, Joomla! is the best package currently available, according to the author of [74]. [71] States that using a static copy of a dynamic website can be advantageous for server-side and client-side website operating

Procedures.

CMSs have developed from simple systems with limited functionality to a system that provides a variety of possibilities and features for managing websites. CMSs enable efficient and dynamic content posting, management, editing, deletion, and modification. They even enable workflow management for websites and give designers and developers the freedom to alter the appearance and functioning of the system. For managing websites, blogs, eCommerce, and web applications, CMSs are frequently used. Users prefer them because of their many benefits, such as their user-friendly interface. Community and developer support simplicity of upkeep, including updates, cost-effectiveness, especially when using open source or free solutions, and flexible functionality with features that are Search Engines optimization (SEO) friendly thanks to the abundance of plugins, add-ons, and extensions. On the other hand, there are a few difficulties, such as the requirement for occasionally hidden expenditures for implementation, customization, maintenance, and the application of routine upgrades to guarantee the website's safety and security [24][70].

Authors of [47][37] Mention that the three primary CMSs, Joomla, WordPress, and Drupal, stand out is essential because of their unique features and abundance of plugins. WordPress is still the most popular CMS, accounting for about 60% of the market and having access to thousands of free and premium plugins and themes.

Author of [85] Search CMSs SEO performance and claims that custom-built websites that do not rely on popular content management systems CMSs commonly appear at the top of search results. However, the Drupal CMS ranks very high despite being utilized by a limited number of websites throughout the web.

There are CMSs for mobiles Magnolia CMS, Cellular CMS, Mobile CMS, and mFabrik, are just a few CMSs created by companies specifically for mobile platforms [48].

While [80] Examined CMSs now in use to identify common accessibility issues, then assessed a set of enhancements offered by Acosta to solve these issues. In [5] they compare using a CMS or developing a website from scratch; they compare the two options and conclude that consumers can choose between them depending

on their needs. But [16] Compare Drupal, WordPress, and Joomla's SEO performance.

The following papers build their websites using a CMS, for example, [3] Build Overcomers' Arena, a website to help with their online visibility. The website was created using WordPress because it is a popular CMS and offers effective plugins. [65] Developed a university website using WordPress CMS. While [73] Create a WordPress website for WICN Public Radio Station. [52] Utilize WooCommerce and the WordPress CMS to create an online store. [69] Developed an online store using WooCommerce and WordPress. [75] utilizing Word Press and the Johku gateway to create a tourism website. [77] recommends Drupal, WordPress, and Joomla as platforms for e-Learning websites. In [43] States that any staff member can alter the page and access the booking system settings on the WordPress-built Tietsikkari booking website as needed.

Due to the popularity of WordPress, many paper search security issues. [64] Provide suggestions for improvements that could result in better and more organized management of the security actions, as well as suggestions for enhancements that could result in better and more organized management of the security community's responses if vulnerabilities are discovered. [63] Create a framework that outlines several processes for a secure content management system.

Article [76] suggests a CMS Common Metamodel encapsulating the essential concerns needed to model and implement CMS-based Web applications.

3.3. What are the domains and advantages of these CMSs? (RQ2)

Table 3. shows the different CMS and their domains. Some CMSs are not working for some domains, or their specialty is in one domain only, while others, like WordPress, can be used for different domains.

A business website can take many different shapes because it is one of the most well-liked and adaptable sorts of websites out there. The dealer can advertise a particular service or good for sale using business websites. They frequently have parts where a dealer may show off and describe the products he is selling. Most websites for service businesses have a booking system that makes it simple for customers to schedule an appointment for website owner service. Suppose the website is a service SaaS (software as a service). These websites allow the vendor to promote his software and make user sales.

On the other hand, websites for product-based businesses frequently directly display the product and facilitate easy purchasing. These are frequently comparable to the eCommerce websites that we discuss below. Additionally, there are start-up websites created to aid with business development.

A blog is a website that lets bloggers create extensive information about almost anything. They often center around a particular theme and are mostly made up of articles and graphics. Travel and food blogs are two of the most well-liked categories of blogs. It is easy to notice that blogs have recently become extremely popular on the internet. Numerous factors have led to this. First, creating one of the most straightforward websites is possible, and starting a blog is straightforward. Also, blogs allow the blogger to write about his specialty and share his knowledge with the world. [29] Talk about sophisticated blogging. An advanced blogging website accepts numerous entries from organization members and bloggers who

are somehow connected to the organization.

eCommerce websites, often known as online stores, let dealers sell things online, just as the business websites discussed above. These websites frequently have product sections where the dealer can showcase his products and a shopping cart and checkout options.

People frequently utilize websites to showcase their work or abilities. The best kind of website to construct for this purpose is a portfolio. They frequently include a gallery where users can show off their work and text and where users may describe their area of expertise and be specific about their work. Depending on users' work, numerous portfolio options have slightly varying formats. Depending on their line of work, users might create anything, from a marketing portfolio to a design portfolio.

When applying for jobs, portfolios are frequently used in addition to resumes or as a digital business card that tells others more about the applicant. Setting up a personal website is a quick approach to increasing the user profile. Essentially, a website of this type surrounds and represents a specific person. Many people use personal web pages to showcase their identities and accomplishments. It is the ideal structure for author websites and actor websites, among other things, because it is similar to a portfolio in many aspects but has fewer visual components. A resume website is one of the most common styles of personal websites. Resumes are increasingly being used worldwide to summarize who website owners are and what they have accomplished. People now frequently use resume websites to present their accomplishments elegantly and conveniently.

Event websites have gained enormous popularity because the globe has migrated online. These websites enable users to present extensive schedules, travel advice, maps, and other details about their events. They may also include scheduling and ticketing applications that let people book seats at their event. This type of website can be utilized for virtual events and is particularly helpful for conferences, shows, concerts, and other gatherings. A wedding website is one of the most well-liked styles of event websites. When considering how to make a wedding website, users can consider including information about the couple, the wedding, a spot for guests to RSVP, and connections to registries.

Online forums are another product of our digital world. Using forums, users may communicate, discuss various subjects, and pose queries. More and more websites are starting to offer a forum so that users may communicate with one another and promote discussion on the site. The forum websites frequently act as a form of unofficial assistance that enables site users to support one another. Numerous situations call for the use of membership websites. Maybe users run an online publication or magazine that requires subscribers. Alternatively, users might want to create a club or private group website, but the user only wants to allow members access.

Nonprofit websites are another category of websites. These websites, which resemble corporate websites, usually include a description of the nonprofit organization, details about the work they do, a gallery of recent events, and a donation page.

There are numerous varieties of nonprofit organizations. Popular nonprofit websites include petition websites, church websites, and school websites. A nonprofit website may successfully represent all these organizations despite their different objectives.

Informational websites are within a broad category that includes numerous items. They act as resources and platforms whose primary purpose is to transmit information. Informational websites should

not be designed to make money; they should offer helpful information. Wikipedias, news websites, encyclopedias, and other similar websites are examples of informational websites. These websites frequently share many characteristics with blogs. For example, both have long content. Searching features to help site visitors locate what they are looking for is another commonality among informational websites.

| CMSs domain | WordPress | Shopify | Wix | Squarespace | Joomla | Drupal | Bitrix | Webflow | PrestaShop | OpenCart |
|------------------------|-----------|---------|-----|-------------|--------|--------|--------|---------|------------|----------|
| Business Websites | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Blogs | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| eCommerce Websites | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Portfolios | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| Event Websites | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| Online Forums | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| Personal Websites | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| Membership Websites | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| Nonprofit Websites | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| Informational Websites | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |

WordPress began as a blogging platform but, over time, transformed into a content management system. For web development, there is a list of features from which to choose a CMS. Web development category, license status, operating system platform, supported web servers, supported database systems, supported middleware systems, template design, and other aspects are among the characteristics of CMS systems [59]. WordPress makes it very simple to create blogs or other online material, and its plugins are its best feature. Unlike WordPress, Joomla gives users more structural flexibility when creating websites. Drupal offers a methodical approach to the complex site [24]. With new competitors entering the CMS market every year across the whole CMS spectrum, the market is attractive. Instead of attempting to be the most excellent CMS for all customer profiles or sectors, as WordPress does, many of them are attempting to be the best in specific sectors [12].

3.4. What are the plugins and templates provided for specific system functions? (RQ3)

CMSs provide users with plugins to extend the functionalities of their websites. Plugins can be installed via a command prompt or a graphical interface; each of the CMSs has many plugins. Some are free, but most are paid plugins; the plugin's functionality ranges from statistics, Search Engine Optimization, Backups, contact forms, advanced galleries, related posts, email subscriptions, spam protection, security checking, and media embeds. The best practice when there is a need for a plugin is to search the CMS community read the user's feedback and get the feedback posted by other users, and pick up the suitable plugin for the functions the website needs.

A plugin typically consists of two components: the front end and

the back end. The portion that the user sees is called the front end. All administrative tasks, including adding, modifying, and deleting content, are completed on the backend [60].

For example, [22] created WPBMB, a WordPress plugin, to ensure that all research labs and department publications were current. Several WordPress plugins provide this capability; however, frequently, the plugins are either no longer updated, lack features that would need the usage of multiple, potentially incompatible plugins, or lack features for layout on a webpage.

Due to the large user base that draws hackers to target websites, the more popular a CMS is, the more attacks it receives. [32] Introduce SQLBlock; this plugin prevents PHP web applications from accessing databases and is compatible with Drupal and WordPress. [36] Create two plugins that enable users to add Symbiota software capabilities to their websites, and the plugins are compatible with WordPress. Moreover, using [51] plugin, It was possible to cut the website's page load time (PLT) by more than 10% compared to the initial PLT by creating a plugin compatible with WordPress.

Article [23] Discuss how to integrate Joomla with the LAPD server utilizing the LAPD plugin and additional plugins. [21] Claims that Wordpress's plugins are primarily helpful. Although it is user-friendly and has good basic functionality, Joomla lacks a few essential capabilities.

From the security perspective, [1] States that because users often choose risky plugins randomly or without experience, problems can lead to websites being hacked. Furthermore, [45] Asserts that plugins are essential for CMS websites to improve functionality and preserve trustworthiness and security. [46] Find incompatibilities occur when plugins unintentionally share six different types of resources, not simply between plugins that add features to one another.

The annotation plugin mentioned in [38] has two primary functions: (a) they let content creators link a particular page or post to a particular annotation stored on (Semantify. it). and (b) they can utilize a page's URL to find an annotation whose URL matches the value of the URL property. Although most users find this functionality to be very helpful, they can always choose to use manual annotation selection instead. Components, modules, plugins, templates, and languages make up extensions [79].

By introducing new features and enabling control over "all parts of the website related to the development, organization, and search engine optimization," plugins serve as the system's primary functional components [30][58].

WordPress has the most plugins of any platform, followed by Drupal and Joomla. A WordPress plugin is a PHP scripting software that enables adding a particular set of capabilities to a WordPress website. Additionally, it enables simple site modification, customization, and enhancement through the addition of functionalities rather than by altering the WordPress core program code [37].

The only system that has maintained attention over time is WordPress. The explanation for this growth may be the sizeable online community for WordPress and the availability of online site-building tools compared to other CMSs. Hard coding may be essential for some projects, but the COVID-19 Malay Corpus project has shown that any project can be completed without it with the correct CMS, plugins, and custom programming. The main benefit of CMS is that it makes it simple to manage, change, and enhance the website's content.

The CMS provides a variety of plugins, extensions, and modules for marketing and search engine optimization (SEO). Using WordPress, users have access to countless plugins that improve the essential operation of their websites [25]. One of the plugins that receive much attention is Yoast SEO, one of the more well-known ones on the market. Yoast SEO. Everybody who owns a blog or website powered by WordPress uses this plugin. Finding websites that do not already have Yoast SEO installed might be difficult. Everyone should utilize it to rank higher in search engines.

Jetpack, created by Automattic, tops the list of WordPress plugins in terms of popularity. Now, it is Jetpack, a versatile tool with (nearly) infinite uses. Users can use it to help with design, security, and marketing. Site analytics, automated social media publishing, a wide selection of WordPress themes, spam filtering, uptime tracking, malware scanning, login security, sluggish picture loading, content delivery network CDN, and others are just a few of its many features. The Akismet plugin is beneficial for security and automation since it prevents malicious or problematic content from being published on users' websites.

Takayuki Miyoshi created the Contact Form 7 plugin; It can control several contact forms on the same website, incorporates Akismet spam filtering, and enables users to choose the styling and fields they want. The plugin provides CAPTCHA and Ajax submitting. Installing the Elementor plugin on the user's website is one of those things he really must do because it dramatically benefits him, especially if he desires complete control over his design. The Elementor library contains a lot of free templates that he can use to start building a page immediately.

A WordPress plugin called Categories pictures was also utilized to allocate the picture to a specific category for visual identification. It was also possible to sort the categories in a specific order and tell which categories are a parent and which are children simply by reading them, thanks to a plugin called Taxonomy Terms Order [37]. The user management tool uses the Ultimate Member plugin, which reduces the administrator's workload by creating new accounts and is easy to use [37].

We anticipate disinformation websites may be more likely to use a free CMS than news websites. Use CMS plugins for social media integration and SEO since disinformation websites are aggressive about content virality and more likely to use a customized version of a stock CMS theme rather than designing a new theme themselves. For instance, the disinformation website freeinfomedia.com utilizes the affordable mts-best theme, the free WordPress CMS, and the Facebook-comments plugin [26]. Currently, CMS plugins enable users to post their content automatically on Twitter [4].

The Octolooks Scrapes plugin extracted online Malay news articles from eight online news sources. The demand for automatically extracting and copying content from other websites into WordPress is met by the Octolooks Scrapes plugin [25]. The COVID-19 Malay Corpus during the COVID-19 crisis replaces WordPress's default search engine with one with more capabilities and customizable settings. These include indexing, searching, and deleting stop words [25]. Numerous modules and extensions for SEO and marketing are available for both Joomla and Drupal.

WordPress, Joomla, and Drupal plugins, extensions, and modules use the Google Visualization API. Examples include the WordPress plugins Visualizer and wpDataTables, the Joomla extensions Pslotatol and JA Google CHart, and the Drupal plugin Views Charts [24].

Users can quickly upload spreadsheets from Excel, CSV, and other

data sources using plugins, extensions, and modules in WordPress, Joomla, and Drupal, such as Visualizer, wpDataTables, and Data Tables Generator in WordPress, Art Data, and POWr Graphs in Joomla, and Chart Suite and Data Visualization Wizards in Drupal [24].

Other charting libraries like Chart.js or Highcharts are also used via plugins, modules, and extensions. Charts in Drupal, the J Modules Chart in Joomla, and the M Chart in WordPress are a few examples of these. The charting libraries allow for the rapid and easy creation of light and simple charts with minimal page load impact [24].

The template is a frame programmed and ready for the user to edit and control styles. [31] created a theme with WordPress, which they chose because users commonly use it. [27] Many web builders, like WordPress, Wix, and OpenCart, offer pre-made website templates to customers that need coding knowledge. These templates, however, are frequently unable to be freely modified as developers desire. The expensive service price for establishing and operating processes is another significant drawback. On the other hand, [53] discusses the evaluation of the extensions and declares that the Joomla core system must be given the same amount of consideration as highly-rated extensions. Before being included in the official directory, each extension should be thoroughly evaluated.

3.5. What are the AI-based plugins in the market? (RQ4)

Computer technologies such as machine learning and artificial intelligence provide more innovative solutions for various electronic products, including smart TVs, GPS devices, TV apps, and other smart gadgets. Thanks to artificial intelligence, computer programs now have the power to make decisions devoid of human wisdom. In order to enhance artificial intelligence and enable the program to make better decisions, machine learning enables it to learn from experiences, data, and user actions. These tools enable programmers to automate operations that typically require human intelligence. For instance, most contemporary mobile phones and smart devices use voice recognition, search patterns, translations, image recognition, and more.

Artificial intelligence can make decisions using preprogrammed knowledge. At the same time, machine learning improves artificial intelligence by acquiring knowledge and self-learning through user engagement. This procedure improves artificial intelligence's intellect and enables more precise decision-making. Artificial intelligence can give website visitors a wiser and significantly improved user experience. It can, for instance, enhance WordPress search, grammar, and style checking, display relevant content, increase conversions, and increase e-commerce sales, among other things.

AI-based plugins for CMSs are available, offering a wide range of features that let users add robust functionality to their websites. The primary benefits are the automated processes that, before AI, required manual labor but are now completed automatically and without interference from people. The following are a few examples of AI-based plugins that improve websites' functionality: One of the two plugins that are pre-installed on each WordPress website is Akismet. To identify spam comments, it employs machine learning and artificial intelligence. The spam submitted by bots can now nearly entirely be detected by Akismet, which millions of websites use. By learning from its errors and identifying patterns across millions of websites, it can also detect

spam comments manually sent by actual human users.

WordLift connects users' WordPress websites to their web-based service. It provides SEO hints to enhance user content using their knowledge graph. It analyses user content to provide facts, figures, and media that fit user articles and help create contextual relationships, leading to better content recommendations.

After Previously being offered as a separate WordPress plugin, The Deadline is now a part of the JetPack plugin family. It is a grammar checker driven by artificial intelligence that evaluates the readability of user material to assist users in writing better. It supports British, American, and Canadian English with some French and German grammar assistance.

The simplest way to translate a website's content without building a multilingual WordPress website is to utilize Google Language Translator. User WordPress website now features the AI and machine learning translation engine from Google.

A cloud-based solution for content curation is called MyCurator. users can incorporate an artificial intelligence-powered content aggregator, which displays articles relevant to visitors' chosen topics and enhances its performance by gaining knowledge from visitors' additions and votes.

Watson analyses the emotional impact of user content using IBM Watson's cognitive artificial intelligence. This plugin teaches users how to change their content's emotional impact to increase visitor engagement.

User may check their WordPress site for malware and malicious code using Quttera Web Malware Scanner. This checking is beneficial if users believe that search engines have black-listed or hacked their WordPress websites. The plugin uses artificial intelligence to improve scan results depending on usage and learn from false positives.

Live Chat 24-7 offers an AI-powered virtual chat agent for user websites. This bot can carry out simple duties like directing people in the right direction if users cannot afford to add live chat support to their website. They must create a free account on the plugin website. Following that, the bot will begin to learn as they use it. Additionally, they may teach it how to respond to visitors' inquiries and what to say.

A WordPress-related posts plugin that uses artificial intelligence is called Related Posts by Bibblio. It gains knowledge from visitor activity on websites to enhance its relevant content. Related posts can be shown in the sidebar, below the article, or by utilizing a short code.

Another recommendation engine with machine learning capabilities is Recomendoo, driven by artificial intelligence. It can show relevant content wherever users want on their website. Depending on how their visitors interact with the recommendations, they get better. Because it is compatible with multilingual websites using WPML and online shops using WooCommerce, consumers can browse relevant products based on what they have already seen on the user's website.

We can integrate an AI-based plugin. Such as the Watson platform contains plugins like cybersecurity threats and spam detectors, Chatbots, visual and voice recognition, translator, and text-to-speech plugins that can be integrated with any website in CMSs like WordPress, Drupal, Joomla, and many more.

One of the most significant attempts in this field was made by the Computer Science and Artificial Intelligence Lab (CSAIL) at the Massachusetts Institute of Technology, which developed the AI2 adaptive cybersecurity platform [35]. AI2 combines machine learning and experienced analysts to adapt and improve over time.

The technology underwent 90 days of testing, processing 40 million log lines each day that came from an e-commerce website. AI2 could identify 85% of attacks without help from a human after the training [15].

Similarly, IBM's Watson artificial intelligence platform examines unstructured data. Thousands of cybersecurity documents are read and learned from each month. This information is then applied to assess, identify, and prevent cybersecurity threats. The Watson platform includes Chatbot plugins, Visual recognition, translator, and text-to-speech plugins that can be integrated with any website [56].

4. Research findings

Users can create, edit, organize, and publish digital content using a content management system (CMS) tool. Individuals and organizations can use it, but small firms can benefit from adopting CMSs to create and manage digital content without requiring a large budget or specialized skills [62]. From the literature reviewed, the following findings were found:

(4.1) CMSs and their usability:

There are many CMSs in the market, but the most used CMS, which has around 60% of the market, is WordPress, followed by Drupal and Joomla, whose market share does not exceed 3%, while Shopify, Wix, and Squarespace are the new competitors in the market who gain a good reputation in the last few years, while Bitrix and OpenCart market share around 1% percent last year and PrestaShop and Webflow market share less than 1% percent.

(4.2) CMSs domains and functionalities:

WordPress was created for bloggers at first, but now it is used for a wide range of websites like Informational websites, Shopping websites, and other types of websites. Shopify was created for shop websites, and it became the famous CMS for building a shop website because it is easy and fast with many supported plugins. While Drupal enables robust and complicated functionality and is easily expandable for a website to have a million pages, WordPress and Joomla are well suited to develop smaller sites swiftly. Various websites can be created using Wix, Squarespace, Bitrix, and Webflow. They have similar functionality to WordPress, just that the plugins and extensions support is not equal to WordPress, making it the best for newbie users. At the same time, PrestaShop and OpenCart are used to build shop websites only.

(4.3) The CMSs plugins, extensions, and modules:

WordPress is reportedly the most widely used website management or blogging system on the Internet, supporting over 60 million websites. It offers over 50,000 plugins with unique capabilities that let users customize their websites to meet their unique needs. Online applications with high performance can be published using Joomla. The interface is simple to use and allows easy management of all features and functionalities. Additionally, many free extensions enable users to enhance and modify their functionality to suit their objectives. Drupal has a wide range of modules and plugins used to enhance the functionality and performance of the users' websites. There is no comparison between WordPress and the other CMSs regarding the number of plugins available and the diversity of functionalities. For many reasons, WordPress is the most common system among

users and has a simple interface that non-technical individuals can handle easily. The essential functions are security plugins, backups plugins, form builder plugins, and Emails plugins which are essential for any website. On the other side, no event prioritization plugin is available, which can be used for nonprofit organization websites to select the best team from a pool of volunteers and choose the required resources.

(4.4) AI plugins in the market:

Many AI plugins are already used. We mentioned IBM's Watson artificial intelligence platform, which includes chatbot plugins where they learn from experiences and form the visitors, and other plugins used for security purposes to check the intruders and security status continuously.

5. Discussion

This review paper tries to answer the questions provided earlier; by answering these questions, we can examine the market and the trends in CMSs, find their features, and identify the domains of the most popular CMSs and their plugins. The WordPress is still in the first place and the most popular CMS in the market, with 64% percent in 2021. We have Shopify, Wix, Squarespace, Joomla, and Drupal, with a percentage of less than 5%. WordPress is preferable as the first choice by users due to many factors. WordPress is easy to use without previous technical or programming experience. The number of free and paid plugins available makes WordPress a great choice, and the reputation of WordPress as CMS makes people choose it among all other CMSs. While Drupal and Joomla lost some of their places in 2021 and still have a place among the top CMSs. we can see in Table 1. that Shopify is the most popular system for building shopping websites. It is coming in second place after WordPress in 2021. WordPress tries to be an ALL-IN-ONE solution for all types of website domains and needs. We can see Shopify as a System specialized in shopping websites and ranked the first system after WordPress. WordPress has hundreds of plugins ranging from designing to cybersecurity and many other plugins. Joomla and Drupal are more complicated than WordPress. Artificial Intelligence and machine learning-based plugins are used for various tasks like spam detectors, Visual and Voice recognition, text-to-speech, translation, and virtual chat chatbot to increase the engagement of the website users and answer any of their inquiries. Watson's platform includes all these features and can be integrated with any website. The development of an events prioritization plugin is required to avoid time and money consumption. While the prioritization process is still done manually nowadays, we need to make it automatic rather than manual.

6. Conclusion

Event management has been an essential topic in the last few years because it is relevant to any country's culture, community, and economy. It is a vital source of money, especially for significant events like the world cup and other sporting events. The conferences and summits are also crucial for tourism and culture. Currently, the Event management process is done by the organization, and the problem is that the prioritization process is done manually. When changes in event attributes like personnel, logistics, or money happen, reprioritizing is not a trivial task. The

SLR is about CMSs because we need a programmable solution for organizations. After all, we live in the data revolution era, and using this solution will make the prioritization process less time and money-consuming.

The findings of our study show that WordPress is occurring in nearly 60% percent of the market, followed by Shopify, Wix, Squarespace, Joomla, Drupal, Bitrix, Webflow, PrestaShop, and OpenCart with less than 5% percent, respectively, and mentions the domains of CMSs and their plugins with their functionalities. The Artificial Intelligence and machine learning-based plugins inspired the future of Event Management prioritization organizations owners to support the work to use AI to enhance their work quality. This paper reviewed the plugins and AI plugins in the market and realized there is a need for such a prioritizing plugin. This paper can be utilized for future searches in CMSs. In the future, the CMS's popularity review can be done on larger sample size as we have targeted only the top ten CMSs and their plugins. The conclusion of this paper is to build an event prioritizing plugin that is used to select the best team and resources for charity organizations. Hence, the organizations conduct their events based on their resources and volunteers, and the plugin must be suitable for all CMSs available in the market.

7. Limitations

We have finished a rigorous evaluation exercise on CMS's study within the parameters of the established paper questions. The result is that 71 studies were eventually found and chosen to be capable of effectively addressing, at the very least, one of the developed research questions. However, due to the various types of CMSs in the market and their plugins, extensions, modules, and functionality, we cannot guarantee that all relevant studies have been included in this field of study. Another issue to consider is that crucial or pertinent studies are omitted if they are in a language other than English because just English publications in this review were considered. On the other side, there are limitations to articles on event management plugins that help the user to select the best team and resources available to conduct an event. There are already plugins in volunteer management and event management, but they are not specific and don't provide the desired results.

Appendix

Table A. The papers mentioned the CMSs

| CMS | Papers mention the CMS |
|-------------|--|
| WordPress | [1], [5], [9], [10], [12], [16], [21], [22], [23], [24], [25], [26], [29], [30], [31], [32], [36], [38], [39], [41], [43], [45], [46], [47], [48], [49], [50], [51], [53], [58], [59], [63], [64], [65], [66], [69], [70], [71], [74] |
| Shopify | [12], [39], [70] |
| Wix | [3], [9], [27], [43], [70], [73], [75] |
| Squarespace | [9], [12], [39], [43], [70], [73] |
| Joomla | [2], [3], [5], [9], [10], [12], [16], [21], [23], [24], [25], [30], [31], [32], [36], [37], [38], [39], [41], [46], [47], [48], [49], [50], [52], [53], [58], [59], [63], [65], [66], [69], [70], [71], [73], [75], [76], [77], [79], [80], [85] |

| | |
|------------|--|
| Drupal | [2], [3], [5], [9], [10], [12], [16], [21], [24], [25], [30], [31], [32], [36], [37], [38], [39], [41], [46], [47], [49], [50], [52], [53], [58], [59], [63], [64], [65], [66], [69], [70], [71], [73], [75], [76], [77], [79], [80], [85] |
| Bitrix | [70] |
| Webflow | [3] |
| PrestaShop | [3], [70], [71], [85] |
| OpenCart | [27], [52], [70], [85] |

Table B. CMSs plugins/extensions with their functionalities

| CMS | Plugin/Extension | Functionality |
|----------------|--------------------------------|---|
| WordPress [82] | Elementor | It is a website-building platform for WordPress. |
| | WooCommerce | It is developed for small-sized to large-sized WordPress-based online retailers. |
| | Wordfence | It lets users know if their site has been compromised and alerts them. |
| | AIOSEO SEO | WordPress "Search Engine Optimization" SEO Plugin, improve rankings and increase traffic. |
| | UpdraftPlus | It is a scheduled backup plugin. |
| | WPForms | Create every type of WP Form, contact forms, surveys, payments, subscriptions, and more. |
| | Akismet | Automatically screens all comments and removes any that appear to be spam. |
| | GTranslate | Quickly translate the user's WP website into several languages. For every visitor, create a customized experience in their native tongue. |
| | AddToAny | Encourage visitors to share content with a unique share button bar that stays in place as a visitor scrolls. |
| Shopify [67] | Mailchimp | Add a signup form to any post or page and allow visitors to join the owner list. |
| | GemPages | Design and build professional-looking & sales-boosting sites. |
| | EcoCart | Increase conversions and customer loyalty with carbon-neutral shopping for free. |
| | TrustedSite | It offers a suite of certifications that help alleviate people's most common concerns when they shop online. |
| | SEO Image Optimizer Page Speed | Google Search is friendly, Preload user pages, and optimizes image sizes. |

| | | |
|------------------|-------------------------------|---|
| | Rewind Backups | It back up the Shopify store so the user can undo unwanted changes. |
| | Form builder- Contact Form | Create a custom or Shopify contact form without the need for technical expertise. |
| | Spam Protection. No captcha. | Allows users to protect their websites from spam. |
| | T Lab | Translate user's store manually or automatically, and it is a Multi-Currency Support. |
| | Video Ad Machine | It is a video marketing plug on Autopilot. |
| | Seguno | Allow users to make email marketing. |
| Wix[83] | Printful | Design & sell products that stand out. |
| | Poptin | Create awesome popups & forms with ease. |
| | Searchanise | Make customers' journey smooth and pleasant by offering them lightning-quick site search and flexible filtering tools. |
| | Rollover Image Effects | Without writing a single line of code, create breathtaking visual picture effects. With a few clicks, customize thousands of cutting-edge animations. |
| | Salesdish Content Protection | Prevent others from stealing user images or text. |
| | Event Viewer Overview | Sell and manage tickets and CRM and email automation to manage and engage with user attendees. |
| | Magic Form Builder | Create and personalize contact forms, online questionnaires, tests, and polls, among other things. |
| | DropCommerce: US Dropshipping | It is fast, reliable shipping from the US. |
| | 1-800Accountant | It is a Bookkeeping platform with reporting, invoicing, mileage tracking, and more. |
| Squarespace [68] | AfterShip | Increase sales with branded tracking pages, prompt messages, and useful shipment data. |
| | Art of Where | Design custom-printed products made on-demand. Leggings, silk scarves, t-shirts, handbags, notebooks & more. |
| | Candid Wholesale | It is a better way to buy, sell and pay wholesale. |
| | EZ Texting | Send Smarter text promotions and automated SMS campaigns to users' customers. |
| | QuickBooks Commerce | Manage multi-channel orders, track inventory, and connect to QuickBooks Online for automated accounting. |
| | Mailchimp for Commerce | Drive traffic and sales with personalized marketing. |

| | | |
|-------------|-------------------------|---|
| Joomla [34] | Order Desk | Order management app that helps users automate their order fulfillment process. |
| | EZ Texting | Send Smarter text promotions and automated SMS campaigns to users' customers. |
| | Akeeba Backup | It produces a site backup that may be restored on any host that supports Joomla! |
| | JSitemap | It is a whole Joomla SEO solution. |
| | Convert Forms | Allows users to create beautiful and optimized forms with no knowledge of coding. |
| | AcyMailing Starter | It allows users to efficiently manage an unlimited number of subscribers, classify them into mailing lists, send customized newsletters, and automate them. |
| | JCE | Users can create links to categories, articles, web links, and contacts on their site utilizing a unique and valuable Link Browser. They can upload, rename, remove, cut, copy, paste, and insert photos into their articles. |
| | Event Booking | It is able the user to create events (both free and paid). |
| | Advanced Module Manager | It regulates modules and how they ought to be controlled. |
| Drupal[14] | EShop | In order to get the website ready to accept orders, the user can add products and enable built-in modules, payment plugins, and shipping plugins using this plugin. |
| | Admin Toolbar | It helps site administration and site-building navigation. |
| | Paragraphs | Users using this plugin can include many paragraph field types, including images, text blocks, quotes, slideshows, videos, and more. |
| | Webform | It allows users to create contact forms, surveys, or feedback forms. |
| | Layout Builder | The user can select from a predetermined collection of layouts to quickly create pages. |
| | Devel | For website administrators and developers, it is a valuable tool. Because of its capacity to produce much content for nodes, comments, users, and different content types and entities, it is frequently used for testing purposes. |

| | | |
|-------------|---|---|
| | Twig Tweak | It improves the experience of development. Additionally, it aids engineers in producing well-organized, understandable code. |
| | Drupal GraphQL | It enables the creation of GraphQL schemas on users' Drupal websites and the exposure of Drupal entities via GraphQL client software. |
| | Redirect and Pathauto | It is a super practical module that makes creating URL redirects easy. |
| Bitrix [7] | KOMPaaS PBX | Make calls in one click, show a client card when an incoming call, automatically create leads from unknown numbers, automatically create tasks for missed calls, Forward calls to the responsible manager, Record conversations in CRM, and Receive chat notifications. |
| | Workflow PDF Generator | Is a plugin created to help convert workflow information into a .pdf format? |
| | NovaPoshta, Justin, Ukrposhta, Meest Express - Logistics sync | It is an application for sending goods or documents from Bitrix24, creating shipments from deals, and tracking status changes in the same app. |
| | Telegram | It allows the users to integrate Telegram linked to their phone number. |
| | Aliexpress Messenger | This integration is designed to synchronize AliExpress orders with Bitrix24 deals. |
| | IQ Desk | Qdesk is the email and web form ticketing system created with customer service teams in mind, enabling seamless collaboration and the delivery of effective and prompt support to user customers. |
| | | |
| Webflow[84] | Enrollsy | It makes enrollment and payment fast, secure, and accessible. |
| | Isotope | It allows the user to filter and search dynamic Collections. |
| | Scrollbar Styler | It lets users change scrollbar width, color, border, radius, and shadow visually in a Webflow-like environment. |
| | Sweet Text | For any text contained in a Webflow Rich Text block, the user can apply custom classes, styles, or Webflow interactions. |
| | Alloy | It automates time-consuming procedures in operations, marketing, fulfillment, and other areas. |
| | Jetboost | No coding is necessary; it includes real-time search, |

| | | |
|-----------------|-----------------------------|---|
| | | dynamic filtering, and more. |
| PrestaShop [61] | PrestaShop Metrics | Using PrestaShop Metrics and a data-driven methodology enhances business efficiency and drives user eCommerce performance. |
| | Stripe Official (SCA-ready) | It improves user conversion rates, combats fraud, and expands user scale globally using the most convenient method of accepting online payments. |
| | PrestaShop Marketin | Users can create Performance Max campaigns without leaving their PrestaShop dashboard to increase traffic. Moreover, connecting customers' storefronts to Google makes it simple to advertise their goods to millions of users on networks like Google Search, YouTube, or Gmail. |
| | PrestaShop Facebook | Enables users to quickly showcase their products on Facebook and Instagram so that consumers may find and purchase them. |
| | PayPal Official Module | It is a provider of internet payments. PayPal provides a variety of quick, easy, and secure alternatives. |
| | Creative Elements | It is a page builder that offers cutting-edge capabilities and page designs. |
| OpenCart [55] | Extension1 | It hides the cart button or Disables Add to Cart OpenCart. |
| | Extension2 | It is a Full-Width Page Content Fluid Container. |
| | Extension3 | It is an extension for Fancy HTML Product Attributes: Custom HTML in the specification. |
| | Extension4 | It Shows the custom in-stock status for each product separately. |
| | Extension5 | It helps users set products in the backend, like the featured products module, and shows the product's image, short description, and buy/learn more links to the product page. |
| | Extension6 | It allows the user to improve SEO rankings and increase traffic. |

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Author contributions

Abdullah Hussein: Collecting literature, Methodology, Writing, editing. **Rozlina Mohamed:** Supervisioning, reading, and commenting.

Conflicts of interest

The authors declare no conflicts of interest.

References

- [1] Akshentsev, Maksym, and Gennady Khalimov. "Ways of protecting the CMS WordPress-based sites." *COMPUTER AND INFORMATION SYSTEMS AND TECHNOLOGIES* (2021).
- [2] Arafath, Yasir. "Content Management Systems: An overview between WordPress and Drupal." (2021).
- [3] Akinbola, Gideon. "Improving Overcomer's Arena online presence through design." (2020).
- [4] Arifon, Olivier, and Nicolas Vanderbiest. "Integrating social networks in a lobbying campaign: The case study of Intermarché, a supermarket chain." *Telematics and informatics* 33.4 (2016): 1105-1118.
- [5] Aladdin, Aso M., Chnoor M. Rahman, and Mzhda S. Abdulkarim. "The Scientific Comparison between Web-Based Site and Web-Builder (Open Source) Project: Functionalities, Usability, Design and Security." *International Journal of Scientific Research and Management* 6.6 (2018): 44-52.
- [6] Backman, Kenneth F. "Event management research: The focus today and in the future." *Tourism management perspectives* 25 (2018): 169-171.
- [7] Bitrix24 Plugins and extensions [Online] available at: <https://www.bitrix24.com/>, [Accessed 5 September 2022].
- [8] Baumgartner, Felizia. "International project management: the application of project management in international event management with focus Switzerland." (2018).
- [9] Barker, Deane. Web content management: Systems, features, and best practices. "O'Reilly Media, Inc.", 2016.
- [10] Bhandari, Mahesh. "Comparison of Wordpress, Joomla and Drupal." (2020).
- [11] Buning, Richard J., and Heather J. Gibson. "The role of travel conditions in cycling tourism: Implications for destination and event management." *Journal of Sport & Tourism* 20.3-4 (2016): 175-193.
- [12] Cabot, Jordi. "WordPress: A content management system to democratize publishing." *IEEE Software* 35.3 (2018): 89-92.
- [13] Carlsen, Jack, Donald Getz, and Geoff Soutar. "Event evaluation research." *Event management* 6.4 (2000): 247-257.
- [14] Drupal Plugins and extensions [Online] available at: <https://www.drupal.org/>, [Accessed 5 September 2022].
- [15] Dickson, Ben. "Exploiting machine learning in cybersecurity." *TechCrunch* (2017).
- [16] Drivas, Ioannis, et al. "Content management systems performance and compliance assessment based on a data-driven search engine optimization methodology." *Information* 12.7 (2021): 259.
- [17] Event (2016a), Merriam Webster Online, available at: www.merriam-webster.com/dictionary/event (accessed 20 August 2022).
- [18] Event (2016b), Cambridge Dictionaries Online, available at: <http://dictionary.cambridge.org/us/dictionary/English/event> (accessed 20 August 2022).
- [19] Getz, D. "Event Management & Event Tourism: Cognizant Communication Corp." *New York* (2005).
- [20] Getz, Donald. "Event tourism: Definition, evolution, and research." *Tourism management* 29.3 (2008): 403-428.
- [21] Ghorecha, Vimal, and Chirag Bhatt. "A guide for selecting content management system for web application development." *International Journal* 1.3 (2013): 13-17.
- [22] Gohara, David W. "WPBMB Entrez: An interface to NCBI Entrez for Wordpress." *Biophysical Chemistry* 234 (2018): 1-5.
- [23] Goranov, Goran, and Radoslava Hristova. "An Approach for Integrating Joomla with LDAP." *2019 II International Conference on High Technology for Sustainable Development (HiTech)*. IEEE, 2019.
- [24] Hakimi, Harnisa Azrin, and Sharifalillah Nordin. "Business Intelligence (BI) Application in Open-source Content Management System (CMS): A Review." *European Journal of Molecular & Clinical Medicine* 8.02 (2021): 2021.
- [25] Hakimi, Harnisa Azrin, and Nurazzah Abd Rahman. "Developing the COVID-19 Malay Corpus Using WordPress Content Management System (CMS)." *2021 Fifth International Conference on Information Retrieval and Knowledge Management (CAMP)*. IEEE, 2021.
- [26] Hounsel, Austin, et al. "Identifying disinformation websites using infrastructure features." *10th USENIX Workshop on Free and Open Communications on the Internet (FOCI 20)*. 2020.
- [27] Huynh, Thao. "The design and development of an e-commerce web application." (2020).
- [28] Hujainah, Fadhl, et al. "Investigation of stakeholder analysis in requirement prioritization techniques." *Advanced Science Letters* 24.10 (2018): 7227-7231.
- [29] Inamke, Vinit Kiran, and Asfahan Sameer Shaikh. "BLOGGING AND E-LEARNING PLATFORM WITH COMPANY PORTFOLIO."
- [30] Iqbal, Muhammad, et al. "An empirical study of popular content management system-wordpress vs drupal vs joomla." *ICTACT Journals* (2020): 1214-1219.
- [31] Islam, Md. "WordPress Theme Development and Customization." (2018).
- [32] Jahanshahi, Rasoul, Adam Doupe, and Manuel Egele. "You shall not pass: Mitigating sql injection attacks on legacy web applications." *Proceedings of the 15th ACM Asia Conference on Computer and Communications Security*. 2020.
- [33] Jones, Calvin. "Events and festivals: fit for the future?." *Event Management* 16.2 (2012): 107-118.
- [34] Joomla Plugins and extensions [Online] available at: <https://www.joomla.org/>, [Accessed 5 September 2022].
- [35] Jones, M. Tim. Artificial Intelligence: A Systems Approach: A Systems Approach. Jones & Bartlett Learning, 2008.
- [36] Kadali, Venkatesh. "Wordpress Plugins for Symbiota2." (2018).
- [37] Koirala, Sudarshan. "Content Management System Customization." (2018).
- [38] Kärle, Elias, Umutcan Şimşek, and Dieter Fensel. "semantify. it, a Platform for Creation, Publication and Distribution of Semantic Annotations." *arXiv preprint arXiv:1706.10067* (2017).
- [39] Khan, Nadim Akhtar, and Humma Ahangar. "Use of Open Content Management Systems in Government Sector." *2018 5th International Symposium on Emerging Trends and*

Technologies in Libraries and Information Services (ETTLIS). IEEE, 2018.

[40] Keßler, Steffen, and Paul Alpar. "Customization of open source software in companies." *IFIP International Conference on Open-Source Systems*. Springer, Berlin, Heidelberg, 2009.

[41] Kumar, Abhilash, et al. "WordPress: A Multi-Functional Content Management System." *2021 10th International Conference on System Modeling & Advancement in Research Trends (SMART)*. IEEE, 2021.

[42] Kitchenham, Barbara, and Stuart Charters. "Guidelines for performing systematic literature reviews in software engineering." (2007).

[43] Kuusamo, Evert. "The development of new and improved online booking system for a small-scale IT maintenance company: a case of Tietsikkari." (2022).

[44] Laminack, I. B. Brent Laminack's Personal site. [Online] Available at: <http://www.laminack.com/index.php/technology/11-a-brief-history-of-contentmanagement-systems> [Accessed 2 September 2022].

[45] Lindén, Tuomas. "Building a secure WordPress website with plugins." (2019).

[46] Lin, Jiahuei, Mohammed Sayagh, and Ahmed E. Hassan. "The Co-evolution of the WordPress Platform and its Plugins." *ACM Transactions on Software Engineering and Methodology* (2022).

[47] Louraço, Daniela, and Célio Gonçalo Marques. "CMS in Public Administration: A Comparative Analysis." *Journal of Information Systems Engineering and Management* 7.1 (2022).

[48] Manashty, Ali Reza, et al. "Armrayan multimedia mobile cms: a simplified approach towards content-oriented mobile application designing." *arXiv preprint arXiv:1009.5347* (2010).

[49] Martinez-Caro, Jose-Manuel, et al. "A comparative study of web content management systems." *Information* 9.2 (2018): 27.

[50] Mirdha, Aakanksha, Apurva Jain, and Kunal Shah. "Comparative analysis of open-source content management systems." *2014 IEEE international conference on computational intelligence and computing research*. IEEE, 2014.

[51] Mohamed, Minhaz Irphan. Automated optimization of WordPress websites using plugins. Diss. 2019.

[52] Nabijonovich, Soliev Bakhromjon, and Rasulov Akbarali Mahamatovich. "Prospects for the Development of Electronic Trade Processes Based on Local Characteristics." *International Journal on Orange Technologies* 3.3 (2021): 305-309.

[53] Niemietz, Marcus, et al. "Over 100 Bugs in a Row: Security Analysis of the Top-Rated Joomla Extensions." *arXiv preprint arXiv:2102.03131* (2021).

[54] NIBUSINESSINFO, 2018. NIBUSINESSINFO.CO.UK. [Online] Available at: <https://www.nibusinessinfo.co.uk/content/different-types-content-managementsystems> [Accessed 2 September 2022].

[55] Opencart Plugins and extensions [Online] available at: <https://www.opencart.com/>, [Accessed 5 September 2022].

[56] Palmer, Charles, et al. "Cognitive Cyber Security Assistants—Computationally Deriving Cyber Intelligence and Course of Actions." *2016 AAAI Fall Symposium Series*. 2016.

[57] Park, Seunghyun Brian, and Kwangsoo Park. "Thematic trends in event management research." *International Journal of Contemporary Hospitality Management* (2017).

[58] Patel, Savan K., V. R. Rathod, and Narendra A. Patel. "Open-Source CMS Selection-A Mystery." *Dostupno na: http://www.enggjournals.com/ijcse/doc/005-IJCSESP33.pdf [Pristupljeno: 07.03. 2018.]* (2010).

[59] Patel, Tansen, Sapna Mittal, and Nirbhay Kumar Awadhiya. "A Review on Content Management Systems of Web Development." (2019).

[60] Petignat, Alain. "A Bookmark Plugin for Flux CMS." (2006).

[61] Prestashop Plugins and extensions [Online] available at: <https://www.prestashop.com/en>, [Accessed 5 September 2022].

[62] Pickard-Whitehead, G., 2018. Small Business TRENDS. [Online] Available at: <https://smallbiztrends.com/2018/04/what-is-a-content-management-system.html> [Accessed 5 September 2022].

[63] Phulre, Ajay Kumar, Shreyas Pagare, and Ankit Chakrawati. "Automated Framework for Web Content Security Through Content Management System." *2022 10th International Conference on Emerging Trends in Engineering and Technology-Signal and Information Processing (ICETET-SIP-22)*. IEEE, 2022.

[64] Phulre, Ajay Kumar, Megha Kamble, and Sunil Phulre. "Content management systems hacking probabilities for admin access with google dorking and database code injection for web content security." *2nd International Conference on Data, Engineering and Applications (IDEA)*. IEEE, 2020.

[65] Rab, Sanjida. A University website using Content Management System (CMS) and add-on plugins. Diss. United International University, 2018.

[66] Roy, Mani Bhusan, and Naresh Kumar. "A comparative study of content management systems: Joomla, Drupal, and WordPress for web application development." *International Journal of Information Movement* 1.7 (2017): 12-17.

[67] Shopify Plugins and extensions [Online] available at: <https://www.shopify.my/>, [Accessed 5 September 2022].

[68] Squarespace Plugins and extensions [Online] available at: <https://www.squarespace.com/>, [Accessed 5 September 2022].

[69] Sabel, Patrik. "Development of an E-commerce site for UBM FLOWBOARDS." (2019).

[70] Shankar B. Chavan Assistant Librarian. Content Management System, Central Library 2018, IIT Delhi Email: shankar.chavan@library.iitd.ac.in.

[71] Singhal, N. I. R. A. J., T. A. N. M. E. Y. A. Mohan, and S. U. B. H. A. M. Sarkar. "A comparative study based on open-source content management systems." *Indian Journal of Computer Science and Engineering [Internet]* 1.4 (2010): 267-76.

[72] Smit, Laricia. Event Management: Putting theory into practice-A South African Approach. Event Management South Africa, 2012.

[73] Thant, Myo Min, Robert Ahearn Dutile, and Xiaohu Hou. "Building Website for WICN Public Radio Station."

[74] Tomiša, Mario, Marin Milković, and Marko Čačić. "Performance Evaluation of Dynamic and Static WordPress-based Websites." *2019 23rd International Computer Science and Engineering Conference (ICSEC)*. IEEE, 2019.

[75] Tran, Duc Long. "Building a tourism website using Word Press and the Johku portal." (2021).

[76] Trias, Feliu. "Building CMS-based Web applications using a model-driven approach." *2012 Sixth International Conference on Research Challenges in Information Science (RCIS)*. IEEE, 2012.

[77] Troussas, Christos, and Maria Virvou. "Advances in

- social networking-based learning." *Intell. Syst. Ref. Libr* (2020).
- [78] Ulkhaq, M. Mujiya, et al. "Combining the AHP and TOPSIS to evaluate car selection." Proceedings of the 2nd International Conference on High Performance Compilation, Computing and Communications. 2018.
- [79] Wadleigh, John R. *Tracking how cybercriminals compromise websites to sell counterfeit goods*. Diss. Master's thesis. Bobby B. Lyle School of Engineering: Department of Computer Science, Southern Methodist University, Texas, 2015.
- [80] Westberg, Hannes. "Evaluating Features for Promoting Accessible Content in Content Management Systems." (2019).
- [81] W3techs [Online] available at: <https://w3techs.com>, [Accessed 5 September 2022].
- [82] WordPress Plugins and extensions [Online] available at: <https://wordpress.com>, [Accessed 5 September 2022].
- [83] Wix Plugins and extensions [Online] available at: <https://www.wix.com/>, [Accessed 5 September 2022].
- [84] Webflow Plugins and extensions [Online] available at: <https://webflow.com/>, [Accessed 5 September 2022].
- [85] Ziakis, Christos, and Maro Vlachopoulou. "Web Content Management Systems used by Search Engine Optimization Experts for Top Rankings in Search Engine Results Pages." *WSEAS Transactions on Computers* 20 (2021): 207-216