

## СЕКЦІЯ 6 МАТЕМАТИЧНІ МЕТОДИ, МОДЕЛІ ТА ІНФОРМАЦІЙНІ ТЕХНОЛОГІЇ В ЕКОНОМІЦІ

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## **AI-POWERED MARKETING AUTOMATION FOR NON-GOVERNMENTAL ORGANIZATION MANAGEMENT**

In the modern world, artificial intelligence is becoming a necessary technology for effective business management. It opens up many opportunities for businesses to enhance efficiency, increase competitiveness and accomplish strategic goals. The purpose of this article is to describe our experience of using AI-based tools in the organization of the work of the non-governmental organization "Dyvo", whose activities are aimed at supporting youth and volunteer activities during martial law in Ukraine. The main tasks that were solved with the help of artificial intelligence are related to branding of the organization and interaction with the target audience. The paper describes the experience using tools such as ChatGPT, Fiverr AI Logo Maker, Telepothq, and HeyGen to create content that shapes the style of the organization and makes it recognizable and competitive in the information space. Thus, in the course of our work, the logo of the organization, the design and code of the non-governmental organization website, advertising information about the organization, and the slogan were created. Having analyzed the results obtained during the work, we can conclude that the use of tools based on artificial intelligence allows us to effectively perform organizational and production tasks without involving additional specialists, funding, and time.

**Key words:** information technologies in management, AI-based tools, generative AI, non-governmental organizations management, marketing.

### Вінник М.О., Полторацький М.Ю., Мандич Т.М., Коннова О.В. АВТОМАТИЗАЦІЯ МАРКЕТИНГУ З ВИКОРИСТАННЯМ ШТУЧНОГО ІНТЕЛЕКТУ ДЛЯ УПРАВЛІННЯ ГРОМАДСЬКОЮ ОРГАНІЗАЦІЄЮ

У сучасному світі штучний інтелект стає необхідною технологією для ефективного управління бізнесом. Він відкриває багато можливостей для бізнесу підвищити ефективність та конкурентоспроможність, досягти стратегічних цілей. Метою цієї статті є опис нашого практичного досвіду використання інструментів на основі ШІ в організації роботи громадської організації «Диво», діяльність якої спрямована на підтримку молоді та волонтерської діяльності під час воєнного стану в Україні. Основні завдання, які вирішувалися за допомогою штучного інтелекту, пов'язані з брендингом організації та взаємодією з цільовою аудиторією. У статті описано досвід використання таких інструментів, як ChatGPT, Fiverr AI Logo Maker, TeleportHQ та HeyGen для створення контенту, який формує стиль організації та робить її впізнаваною та конкурентоспроможною в інформаційному просторі. ChatGPT дозволяє генерувати текстовий контент для соціальних медіа та веб-сайту організації, може бути корисним в розробці організаційних документів тощо. Також ми описуємо особливості побудови запитів до ChatGPT для отримання більш точних очікуваних результатів. Fiverr AI Logo Maker надає можливість швидко створювати унікальні логотипи та інші візуальні елементи бренду, що полегшує процес розробки фірмового стилю організації. TeleportHQ надає генератор дизайну веб-сайтів зі штучним інтелектом, який автоматично створює веб-сайт із адаптивним макетом за допомогою одного запиту ChatGPT, а HeyGen дозволяє створювати відеоконтент на основі власного текстового матеріалу. У ході нашої роботи було створено логотип організації, дизайн та код сайту громадської організації, рекламну інформацію про організацію, слоган. У статті аналізується, як застосування обраних інструментів сприяє підвищенню впізнаваності громадських організацій, спрощує процеси створення контенту та зменшує витрати часу і ресурсів, що особливо важливо для організацій з обмеженими бюджетами. Проаналізувавши отримані під час роботи результати, можна зробити висновок, що використання інструментів на основі штучного інтелекту дозволяє ефективно виконувати організаційно-виробничі завдання без залучення додаткових фахівців, фінансування та часу. Отриманий досвід дозволить масштабувати ці процеси для подальшої діяльності як громадської організації «Диво», так і аналогічних організацій у всьому світі.

**Ключові слова:** інформаційні технології в менеджменті, інструменти на основі ШІ, генеративний ШІ, управління громадськими організаціями, маркетинг.

**Problem statement.** Artificial intelligence – a branch of computer science that models the human intelligence process – has become a revolutionary technology over the past few years, transforming aspects of business processes, decision-making, and interaction with customers in various business sectors. Modern technological advances in the field of machine learning, natural language processing, and data analytics make it possible to implement innovative solutions that accelerate business development. Businesses are increasingly turning to artificial intelligence to improve and enhance their operations. Those who use artificial intelligence gain an advantage in terms of innovation, flexibility and the ability to quickly respond to market dynamics. However, the possibilities of using AI in the business environment are still being explored and many business owners are not aware of all the benefits of using this technology. According to IBM analytics, only 35% of companies use AI in their operations [14]. Also, nine out of ten leading companies are investing in artificial intelligence technologies, but only 14.6% have applied artificial intelligence capabilities in their work [14].

In business, artificial intelligence has a wide range of applications. Its elements can be used to automate routine tasks, allowing employees to spend more time on more important

tasks. The use of artificial intelligence can be effective for the following tasks:

**1. Customer support and customer service:** a common use of artificial intelligence is the development of chatbots or virtual assistants that provide customer support, answer clients' questions, and solve their problems.

**2. Content generation:**

– generating text array of information. A business owner can easily generate text content for advertising, filling his website, or creating posts on social networks;

– generation of graphic images and website design. It is possible to create a logo for a client's business, advertising images or design his website without the need to contact specialists;

– generation of video and audio content. AI-based tools allow users to generate audio and video materials from a text script without needing actors, sets or specialized software;

– program code generation. The user can generate program code and refactor code without involving programmers.

**3. Recommendations and personalization:** AI can analyze user behavior and recommend relevant content or products to them.

In addition, AI-based services make it possible to solve some of the issues in the management of enterprises, companies and non-governmental organizations: marketing, automation of business processes, improving

interaction with clients, and image management.

**Analysis of recent research and publications.** The components that form the image of the organization, as noted by A. Kolodko and S. Illyashenko, include “corporate philosophy, history-legend of the organization, appearance of the organization, corporate culture, development of relations with the public” [9]. According to T. Semenchuk and A. Gera, the image is influenced by “the official policy of the organization, corporate advertising communications, corporate personality, corporate style of the organization, product image” [22]. Let's focus on what allows a brand to be positioned – creating an image in the minds of the target audience (primarily verbal and visual images, information, and compliance with requests) and consider the potential of artificial intelligence tools in this process.

In recent years, interest in the use of artificial intelligence in marketing has increased significantly. Thus, G. Ostrovskaya and O. Ostrovsky describe several areas of application of artificial intelligence for marketing automation, in particular, they note that “the use of AI in business improves the quality of the brand and contributes to more innovative and targeted advertising” [17]. N. Proskurnina defines artificial intelligence tools, including machine learning, data analysis, business forecasting, dynamic pricing, search, content generation, recommendations/tracking, and ad targeting [21]. O. Yakushevskaya outlines the vectors of the application of artificial intelligence in marketing, defining the main goals as “writing texts, communicating with consumers, generating and processing visual content, analytics, working with video and audio, presentations” [28]. In addition to content creation, artificial intelligence, as A. Kovalchuk notes, can carry out market research and a brand's target audience, monitor social media, develop creative concepts, and track consumer reactions. That is, together with the search and generative function in the business plane, the analytical and predictive skills of such resources are updated and have practical application [13].

Artificial intelligence can be an effective tool for creating personalized marketing through the analysis of user emotions and moods, as well as how brand logos, colors, or slogans affect consumer perception. This allows business owners to measure customer reactions to their campaigns, products and

services and develop strategies based on emotions [19]. For example, Skai is a platform for managing advertising campaigns that uses artificial intelligence to analyze user data and identify their emotional reactions to advertising [25]. This helps companies optimize their advertising strategies and achieve better results. Pallathadka *et al.* consider the use of machine learning and artificial intelligence in e-commerce, business management and finance [18]. They highlight the following applications: the use of chatbots developed using artificial intelligence methods for customer consultation; processing and analyzing customer data to improve the personalization of customer recommendations based on their purchase history; ensuring information security through the detection and prevention of fraud using machine learning algorithms. The authors note that thanks to the use of AI, business owners can improve the quality of customer service and maximize profits. Jasmin Praful Bharadiya notes that the use of machine learning and artificial intelligence in business analytics allows organizations to efficiently process large volumes of data, identify hidden patterns, and make accurate forecasts [2]. This enables proactive decision-making, optimizes resource allocation and improves operational efficiency. The author also notes that AI-driven analytics help companies better understand their customers' behavior and personalize experiences based on the data they receive, leading to greater customer engagement and revenue growth.

The use of artificial intelligence can be useful when searching for and selecting the right candidates for a job. This can be applied through the use of chatbots that are used in candidate recruitment, offering candidates the opportunity to ask questions that are interpreted and answered using natural language processing (NLP) [7]. For example, global airline Delta Airlines has developed an AI-powered chatbot that answers candidate questions and provides personalized feedback to improve the candidate experience and optimize recruiting. Global technology company Siemens uses artificial intelligence algorithms to analyze candidate profiles, resumes and online assessments to identify suitable candidates for specific jobs [12].

Considering the potential opportunities and already implemented attempts to use specific services based on artificial intelligence in the process of image formation, positioning and promotion of

brands, we are convinced of the presence and perspective of such practices. Scientists note the effectiveness of ChatGPT for generating unique texts with the aim of “increasing the target audience’s interest in the brand” [20]. Analyzing the benefits of using ChatGPT in digital marketing, researchers highlight the following: increased efficiency due to automation, improved customer engagement, more accurate data collection, which leads to better decision-making, and cost savings due to the reduction of labor costs associated with manual management [6].

However, there are certain limitations in using ChatGPT in interaction with customers:

- inaccuracy in chatbot responses, which may arise due to incomplete or incorrect data on which ChatGPT AI models were trained;
- limited understanding of the context of customer questions, which may arise due to difficulties with understanding the nuances of human language by artificial intelligence;
- customer concerns about the privacy and security of personal data when interacting with chatbots [1].

Dawid Jarco and Lukasz Sulkowski concluded that the most effective use of ChatGPT would be a combination of a person’s knowledge of a certain field and information obtained from chat [11]. People can use the information provided by ChatGPT to make more effective business decisions. In addition, the authors note that providing ChatGPT with clear commands, data and assumptions significantly helps in the process of making business decisions.

Scientists describe the possibilities of such resources as Phrasee to consider the “brand writing style and the given structure of writing” to create advertisements, publications and correspondence, which will ensure individuality and recognition [24]. The ability to provide stylistic and functional variability of texts is not characteristic of all programs, therefore “for search optimized texts, the GrowthBar neural network is better suited. Some programs, such as Gerwin AI and Copy AI, among other things, are able to take into account the tonality of the text – business style, entertaining content for social networks, etc.” [23]. At the same time, the researcher pays attention to visual content, noting that “Looka allows you to generate a complete mockup package for a given brand in a matter of minutes (from business cards and a layout for a clothing website and outdoor advertising)” [23]. Therefore, more and more often scientists analyze the functionality

of generative resources and compare their advantages and disadvantages. Even a few given examples illustrate that the created opportunities are versatile in meeting the needs of business process participants.

Many people may not have a proper understanding of the capabilities and benefits of AI. The lack of clear and concrete examples of successful use of AI in business can make this technology less attractive to companies. Therefore, highlighting successful cases of its practical use is important.

**The purpose of the article** is to present our experience in organizing the work of the non-governmental organization “Dyvo” using tools based on artificial intelligence.

**Methods.** The methods used in the proposed study include:

- a review of Ukrainian and foreign scientific works devoted to the application of artificial intelligence in marketing, which confirm the perspective of the topic. It also outline the range of possible applications of AI-based tools for the management and promotion of organizations;
- a descriptive method for explaining the principles of operation of tools based on artificial intelligence, chosen for the organization of work and branding of a Ukrainian non-governmental organization;
- a modeling method for the practical approbation of the generation of the necessary content for the branding of a non-governmental organization and interaction with the target audience. The mission and tasks of the NGO, the desired identity, and the formats of the planned media content are considered;
- a generalization that allows us to summarize the effectiveness of ChatGPT, Fiverr AI Logo Maker, Telepothq and HeyGen tools in creating content that shapes the organization’s style and makes it recognizable and competitive in the information space. These tools facilitate workflow optimization by obviating the necessity for extensive specialist engagement, thus saving time and resources.

**Presentation of the research material and its main results.** In June 2023, the non-governmental organization “Dyvo” was created to support youth and volunteer activities under martial law [15]. The statutory purpose of the non-governmental organization is to support and develop young people in educational, scientific and public activities, to help educational youth during the war. Tasks include volunteer assistance, scientific and educational activities and

projects, and support for young scientists, doctoral students, post-graduate students, master's students, and bachelors [27].

To start work, a non-governmental organization needs to solve several tasks at once:

1. search and implementation of projects that meet the statutory goals;
2. presentation of the organization's activities in the information space and further branding of the organization for interaction with partners, grantors and recognition among the target audience.

Since the founders of the organization were 2 people, many functions can be automated thanks to the active development of resources based on artificial intelligence. This allows the founders to perform organizational and production tasks without involving additional specialists, financing and spending extra time.

Among the first steps are defined:

1. Generation of organizational documentation.
2. Generation of slogan and business card.
3. Logo generation.
4. Generating site design.
5. Generation of an educational video for the implementation of the first project.

Next, we describe our experience of using tools based on artificial intelligence to organize the work and management of the NGO "Dyvo".

#### 4.1. Text content generation

One of the most common use cases for artificial intelligence-based tools is text content generation. We are considering the use of ChatGPT, a generative AI chatbot developed by OpenAI that uses natural language processing and can be successfully used to create text content [3]. We can use this tool for the activities of a non-governmental organization as follows:

- creation of engaging content for various social media channels and the organization's website, highlighting current projects, events and achievements to maintain an active online presence;
- assist in developing organization documents, terms of service, and legal notices to ensure clarity and compliance;
- ChatGPT can be effectively used to create project proposals, define goals;
- creation of training content for staff;
- generating CVs, cover letters, etc.

Phrasing ChatGPT questions correctly is key to getting accurate and useful answers. Next, we describe the features of constructing

chat queries to obtain more accurate expected results.

In GPT (Generative Pre-trained Transformer) chat, there are no strict requirements for specific query parameters, and you have more freedom in formulating your queries.

The main parameters that can be configured include:

- **Language:** You can specify the language in which you want to receive a reply. For example, "Language: Ukrainian" or "Language: English".

- **Specific request format or parameters:** if you need information in a specific format or with specific parameters, you can indicate this in the request.

- **Model:** you can define a specific model that will be used to generate the response. For example, "Model: text-davinci-002".

- **Response length:** you can specify the maximum number of tokens (words) that the response should have. For example, "Response length: 50 tokens".

- **Context:** you can add context to your query to provide more information or create a logical sequence of queries and responses.

- **Time or geographic context:** if your request is related to a specific time or place, you can provide relevant context parameters.

Next, we provide tips for building chat queries that will allow you to get more accurate and correct results.

1. **Specify keywords:** specify the main keywords or phrases you want to include in the response. For example, if you are looking for information about monuments in Paris, use the following query: "Monuments in Paris".

2. **Add additional parameters:** specify additional parameters that define your query. For example, "The best restaurants in Paris with French cuisine".

3. **Consider specific limitations:** if you have limitations or specific needs, include them in your request. For example, "Restaurants in the center of Paris that are open after 21:00".

4. **Use filters:** add filters to increase the precision of your query. For example, "Hotels near the Eiffel Tower with free Wi-Fi".

5. **Use pronouns, prepositions, and conjunctions:** adding pronouns ("which", "where"), prepositions ("with"), and conjunctions ("and", "or") helps clarify the request. For example, "Museums in Paris and London".

6. **Be Specific:** to get an accurate answer, try to be as specific as possible in the wording of your query and parameters.

7. **Check spelling:** check the spelling of keywords and phrases to avoid unnecessary mistakes.

**Models.** At the time of the last updates in September 2021, OpenAI provided access to the following models (Figure 1):

- **gpt-3.5-turbo:** a core model with over 175 billion parameters used to generate textual content and query responses. This model is optimized for speed and efficiency.

- **text-davinci-002** (also known as “Davinci”): this model is known for its creativity and ability to generate more creative content. It can be useful for tasks that require a more creative response.

- **code-davinci-002:** a specialized model for generating program code in different programming languages. It helps to automate the code creation process.

- **davinci-codex:** another model specialized in software code generation.

- **curie:** a model optimized for understanding text and generating question answers.

In the context of machine learning models, including ChatGPT, a token is the smallest unit of text into which text can be divided. Tokens can be words, numbers, punctuation marks, or even single characters such as letters or spaces.

Next, we provide an example of a correctly defined and configured request to ChatGPT.

**Request to GPT chat:**

**Language:** Ukrainian

**Model:** text-davinci-002

**Response length:** 150 tokens

Generate the charter of the non-governmental organization.

**Context:** In the context of a charity organization in Ukraine.

**Answer in the following format:** HTML: ol

**ChatGPT's response:**

```
<ol>
  <li><strong>Name:</strong> Non-governmental organization “Name”</li>
  <li><strong>Location:</strong> [Address]</li>
  <li><strong>Registration number:</strong> [Number]</li>
  <li><strong>Purpose and tasks:</strong> [Description of the purpose and tasks of the organization]</li>
  <li><strong>Members of the Non-governmental organization:</strong>
    <ol>
      <li>Members can be individuals or legal entities who accept the terms of the charter.</li>
      <li>Acceptance of new members by decision of the General Meeting.</li>
    </ol>
  </li>
  <li><strong>Management bodies:</strong>
    <ol>
      <li>The General Meeting is the highest management body.</li>
      <li>The Board is an executive body elected by the General Meeting.</li>
    </ol>
  </li>
  <li><strong>Financial activity:</strong> [Regulations on financial activities]
  </li>
  <li><strong>Reorganization and liquidation:</strong> [Regulations on reorganization and liquidation]
  </li>
</ol>
```

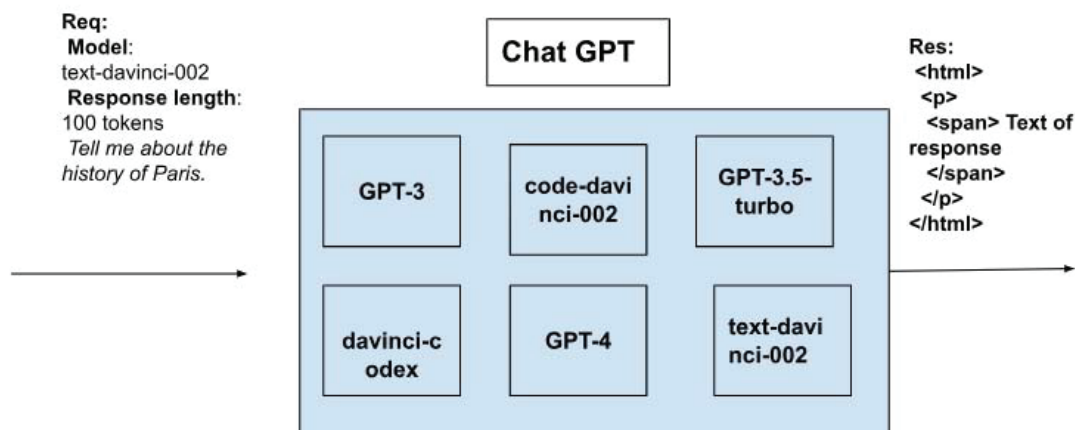


Figure 1. Example of a request to ChatGPT

These examples show how you can customize your queries to get more accurate and useful information from the system. Following are some of the formats that can be used by ChatGPT users according to their purpose:

1. **Plain Text.** Plain text without special formatting.
2. **HTML** (Hypertext Markup Language). Generate HTML code to create web pages or insert HTML markup.
3. **Markdown.** Use Markdown markup to create lists, headings, links, and more.
4. **CSV** (Comma-Separated Values). Comma-Separated Values format for creating tables and lists of data.
5. **JSON** (JavaScript Object Notation). JSON format for structured data.
6. **XML** (Extensible Markup Language). Using the Extensible Markup Language format for data exchange.
7. **YAML** (YAML Ain't Markup Language). Using YAML to represent structured data and settings.
8. **RTF** (Rich Text Format). Generate text in RTF for more text formatting.
9. **TeX/LaTeX** (Text Formatting Language). Use of TeX or LaTeX format for scientific and mathematical texts.
10. **BBCode** (Bulletin Board Code). Using BBCode markup to format text in forums and online communities.
11. **RDF** (Resource Description Framework). Resource Description Framework format for representing metadata and relationships between resources.
12. **OWL** (Web Ontology Language). Web Ontology Language format for creating ontologies and defining concepts.

#### 4.2. Creation of the organization's slogan

As K. Olinichenko and O. Pryadko note, "ChatGPT can be useful in generating ideas

for content, writing headlines, structuring material, as well as improving grammar and text style" [16]. We consider it appropriate to use ChatGPT to generate the organization's slogan. Please note that the content of the slogan is influenced by keywords, clarifying it, but grammatically the constructions are similar.

#### Example 1

**User:**

**Language:** English

**Model:** text-davinci-002

**Response length:** 20 tokens

Come up with a **slogan** for a non-governmental organization that supports young people in wartime

**Context:** In the context of advertising

**Answer in the following format:** Plain Text

**ChatGPT:**

"Fostering Hope, Inspiring Change: Empowering Youth in Wartime, One Volunteer Act at a Time".

Expanding information about the scope of the organization's activities and its goals (supports Ukrainian youth + volunteers) or the name of the organization ("Dyvo") specified in the request are considered when generating a slogan. Adding the adjective Ukrainian puts emphasis and has an implementation in the text of the slogan (Table 1).

Keywords also help determine the shape of the slogan. Without instructions, ChatGPT generates various slogans consisting of two parts, where the second part after a colon expands and clarifies the content of the first part. To change the grammatical design of a speech structure, use a rhyming form or

#### Example 2 – Table 1

The result of generating an organization slogan using ChatGPT

Request to ChatGPT	Response
<p><b>Language:</b> English  <b>Model:</b> text-davinci-002  <b>Response length:</b> 80 tokens  <i>Come up with an advertising slogan for a non-governmental organization that <b>supports Ukrainian youth and volunteers during the war</b></i>  <b>Context:</b> In the context of advertising  <b>Answer in the following format:</b> Plain Text</p>	<p><b>ChatGPT:</b> "Ukrainian Hearts United: Empowering Youth, Inspiring Volunteers, Building a Resilient Tomorrow Together".</p>
<p><b>Language:</b> English  <b>Model:</b> text-davinci-002  <b>Response length:</b> 80 tokens  <i>Come up with an advertising slogan for a non-governmental organization "<b>Dyvo</b>" that supports Ukrainian youth and volunteers during the war</i>  <b>Context:</b> In the context of advertising  <b>Answer in the following format:</b> Plain Text</p>	<p><b>ChatGPT:</b> "Dyvo: Nurturing Hope, Empowering Ukraine's Future".</p>

a specific number of words, etc. you must enter keywords into the query. For example, we used “**a rhyming slogan**”, “**a 3-word slogan**”, “**a 5-word slogan**”. It should also be noted that in the following examples, we present a simplified version of the request to chat, without specifying the model, context, response length, etc.

#### Example 3

**User:** Come up with **a rhyming slogan** for a non-governmental organization that supports Ukrainian youth and volunteers during the war

**ChatGPT:** “Ukraine's Brave Hearts, Youth and Crew,  
In War's Embrace, We Stand True.  
Volunteers and Youth, Side by Side,  
Together We Rise, With Courage as Our Guide.”

**User:** Come up with **a 3-word slogan** for a non-governmental organization that supports Ukrainian youth and volunteers during the war

**ChatGPT:** “Unity Through Strife.”

**User:** Come up with **a 5-word slogan** for a non-governmental organization that supports Ukrainian youth and volunteers during the war

**ChatGPT:** “Empowering Ukrainian Youth, Uniting Volunteers.”

The next request was to write short information about the non-governmental organization “Dyvo” for the website. Since the dialogue already provided context, including the statutory objectives, ChatGPT used this information in the description, but the response to the request was very generalized and did not reflect the uniqueness of a non-governmental organization that must be competitive among similar associations.

#### Example 4

**User:** Write short information about the NGO “Dyvo” for the site

**ChatGPT:** “Dyvo is a dedicated non-governmental organization passionately committed to supporting Ukrainian youth and volunteers during times of war. Our mission is to nurture hope and empower the future leaders of Ukraine, fostering resilience and unity. Through innovative programs and unwavering community support, Dyvo strives to create a positive impact, standing as a beacon of strength and solidarity in challenging

times. Join us in building a brighter tomorrow for Ukraine, where miracles happen through compassion and collective efforts.”

To strengthen the uniqueness and more expressive presentability in the information space, it is necessary to clarify the request by entering additional keywords related to the regional context, the target audience and the content of the planned events.

#### Example 5

**User:** The information turned out to be very general. Please specify that we work for people from the Kherson region, where hostilities continue due to the Russian attack. Our activities are designed to support students, young scientists and vulnerable categories of the population. We create educational content that can make life easier in the frontline zone, and we also attract humanitarian aid to support the population.

**ChatGPT:** “Dyvo: A Beacon of Hope in Kherson

In the face of ongoing hostilities due to the Russian attack, Dyvo stands as a lifeline for the people of the Kherson region. Focused on supporting students, young scientists, and vulnerable communities, our organization is dedicated to making a difference in the lives of those affected.

We specialize in creating educational content tailored to ease life in the frontline zone, offering practical solutions and valuable insights. Additionally, Dyvo actively mobilizes humanitarian aid to provide essential support to the local population.

Join us in our mission to empower the resilient people of Kherson, offering not just aid, but a pathway to a brighter future.”

As we can see, the facts given in the clarifying request form the basis for the generated information about the organization, which takes into account the location, age and social characteristics of the target audience, specific areas of activity, and therefore allows us to more clearly position ourselves in a competitive environment, forms a unique image, and inspires trust.

Understanding that long texts can be perceived worse, especially by the clip-thinking generation, we can adjust the form of writing information, limiting the request to three sentences. Thus, a concise and meaningful text will attract attention and motivate further acquaintance with the organization.



## Example 6

**User:** Write it in three sentences

**ChatGPT:** “*Dyvo: Bringing Hope to Kherson. In the midst of ongoing hostilities from the Russian attack, we focus on supporting students, young scientists, and vulnerable communities in the Kherson region. Through educational content and humanitarian aid, we strive to make a meaningful impact and be the beacon of support for those facing adversity.*”

### 4.3. Logo creation

Next, we consider the possibilities of using artificial intelligence to create the logo of the organization. Content generation systems can automatically create graphic elements and compose them into a logo using given parameters and guidelines.

We used the Fiverr tool to create the logo of the PO “Dyvo”. Fiverr AI Logo Maker is an advanced logo maker that uses artificial intelligence to create professional, high-quality logos for businesses and brands [5]. This tool allows the user to choose the direction of business for which he needs to create a logo; style that the user likes; it is possible to determine the individuality of the brand (classic or modern, traditional or innovative, etc.), to choose a color scheme; it is possible to add a company slogan. This tool will offer a fairly large number of options for generated logos (Figure 2).

The user also has the opportunity to edit the chosen logo: change colors, text, placement of elements, etc. (Figure 3).

With the help of this tool, we developed a logo of a non-governmental organization (Figure 2), which will be used in the future in the formation of its brand and reputation.

### 4.4. Website design generation

Next, we created a site design for the NGO “Dyvo” using the Teleporthq tool – a website and user interface builder based on artificial intelligence that uses code generated by OpenAI [26].

A feature of this tool is the addition of artificial intelligence with the help of such technologies as ChatGPT and Vision API. So, the user can describe in plain language what kind of site they want and the AI website design generator will create a responsive layout. This tool also allows the owner to make changes to the design after generation, and it is also possible to export the code for his project.

The user only needs to enter the description of the site they want as a result, and Teleporthq will generate a mockup of the site with further editing options. The generated site design already contains a certain text content, according to the chosen topic. The user has the opportunity to change the site titles, texts, sizes and locations of sections, color scheme, and so on.



Figure 2. Logo of the non-governmental organization “Dyvo”

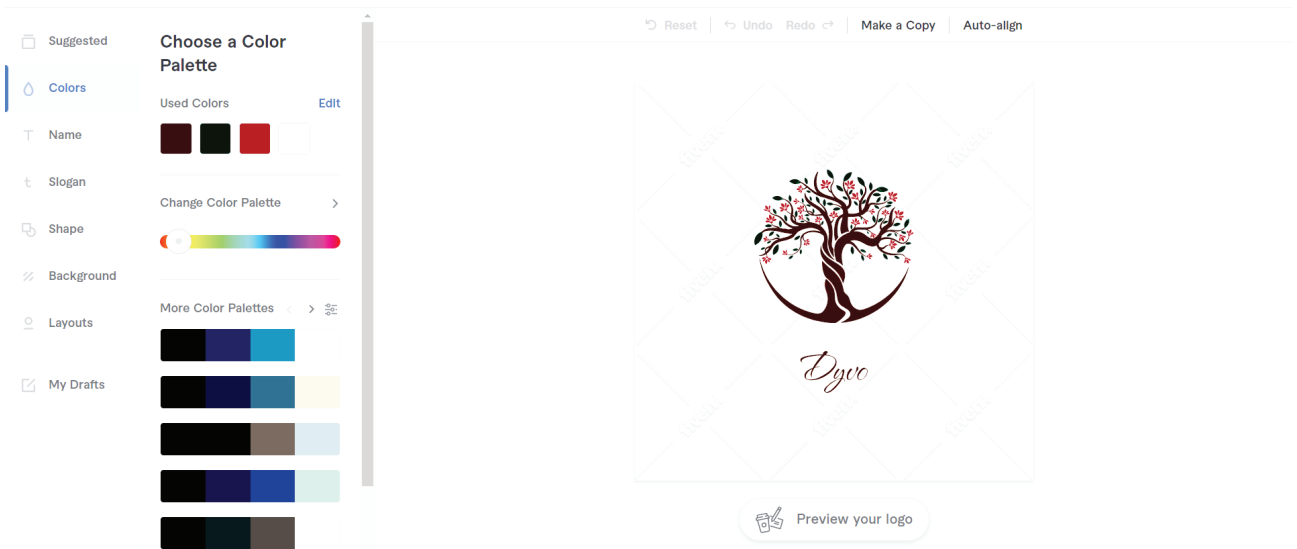


Figure 3. Fiverr platform interface

After we determined all the necessary parameters, the Teleporthq platform generated a design for the website of the NGO “Dyvo” (Figure 4).

This platform allows users to download the generated website code. Teleporthq allows you to download the following types of code:

- React
- Next
- Vue
- Nuxt
- Angular

The user also has the option to export the code as a ZIP archive, upload it to GitHub or CodeSandbox. To upload the generated project to GitHub, you only need to add a personal access token. Next, a repository will

be automatically created in the user's GitHub account and the project code will be uploaded. After making changes to the project, the user only needs to click the export button, and the platform will automatically make updates to the appropriate repository.

#### 4.5. Video generation

AI-powered tools allow people to write text scripts and convert them into videos. Such tools greatly simplify the process of creating video content for business owners, as well as save time and money for users.

Advantages of using AI to create video content:

- eliminating the need for physical scenery, actors and film crews. This allows you to significantly save time and money;



Figure 4. Teleporthq platform interface

- facilitating the creation of multilingual videos aimed at a global audience thanks to the ability to use different languages and dialects in the generated videos;
- AI algorithms allow analysis of user preferences and behavior, which can be useful in creating personalized video content according to audience interests.

In the course of our work, we also explored the possibilities of using video generation tools to create content for the NGO “Dyvo”. We used the HeyGen – a platform for creating video content that uses generative artificial intelligence to optimize the video creation process [8]. Features of this tool include an avatar generator, conversion of written text into speech using artificial intelligence, and voice cloning.

This tool allows you to convert plain text into video content. The user can use his text or create a new one thanks to the GPT Script Writer integrated into this platform.

It is also possible to choose the language and adjust the voice of the speaker based on such parameters as gender, age and the purpose of this video (sales, marketing, training and development, etc.) (Figure 5).

This platform also supports the use of own audio files to generate video content. The user has the opportunity to choose and customize the avatar of the speaker (Figure 6).

HeyGen can be used by the non-governmental organization “Dyvo” to create short video lectures and post them on the website as part of the “Mobile for life” project, dedicated to teaching older people. This will be especially relevant for those who live in the war zone. The training will focus on the competent use of smartphones and media-literate behavior in the information space. Generating educational video lectures instead of recording such content in a “live” format is very convenient in wartime conditions in the absence of proper technical conditions for creating high-quality video content. In addition, it will make it possible to disseminate knowledge in an online format, since face-to-face classes and gatherings of people in front-line settlements are impossible for security reasons. Therefore, one of the activities of the NGO, which combines both volunteering and the implementation of educational activities, in the current conditions of martial law, can be implemented as best as possible with the use of artificial intelligence, which will replace the teacher in the frame, and from the technical side – the operator and the assembler.

Next, we give a list of typical AI services that can be used to automate everyday tasks in managing an organization (Table 2).

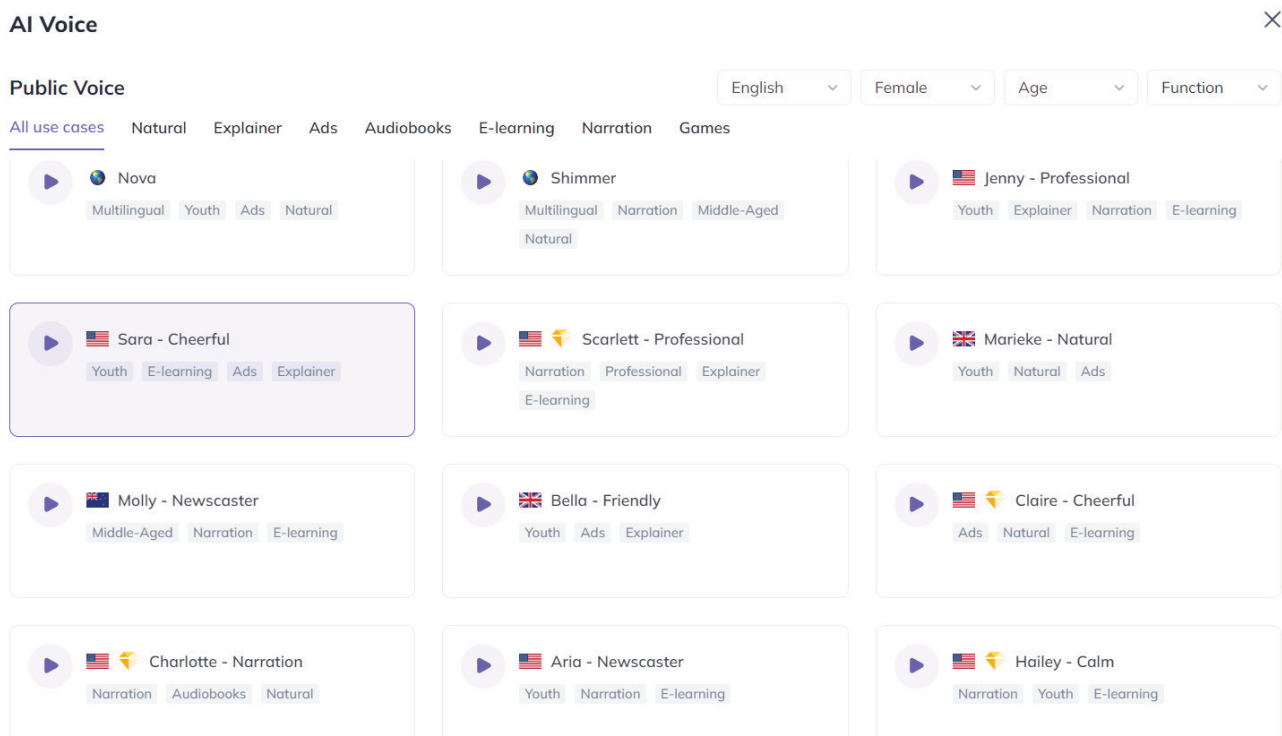


Figure 5. Setting up the speaker's voice and language in HeyGen app

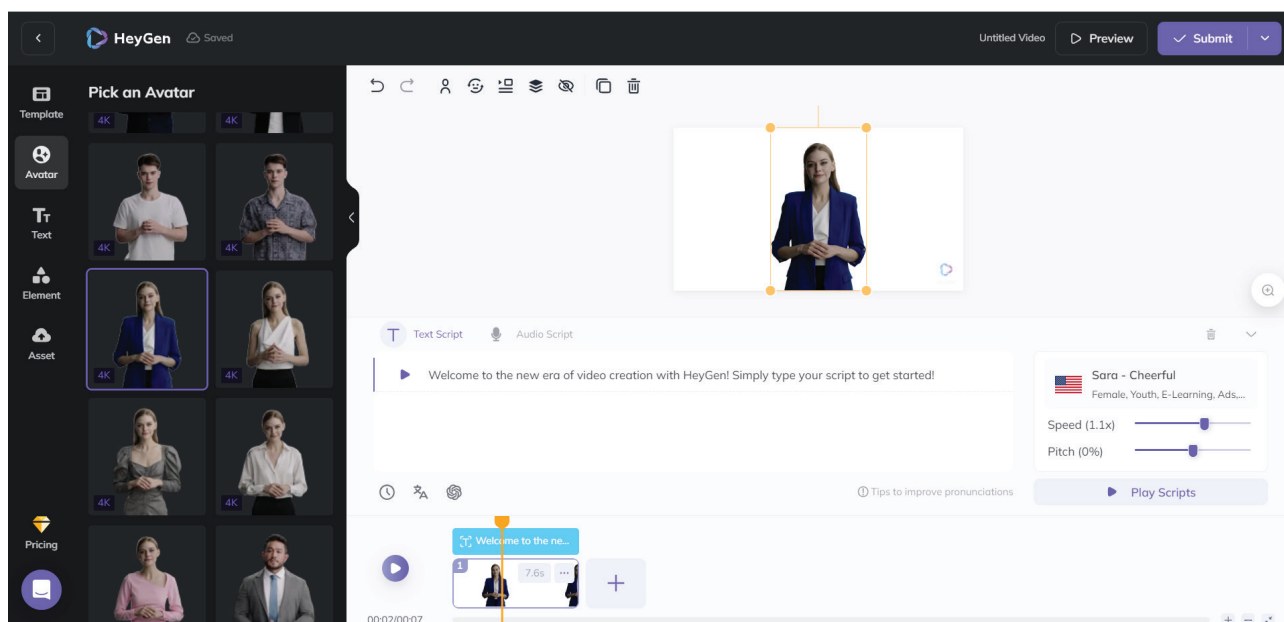


Figure 6. HeyGen platform interface

Table 2

## AI services

№	Name	Description	Link
1	Eightify	The service allows you to extract key information from YouTube videos, saving your time. The user needs to add a link to the video and he will receive all the content in text format.	<a href="https://eightify.app">https://eightify.app</a>
2	Cohesive	A convenient AI tool for content creation: publications, articles, interviews, essays, etc.	<a href="https://cohesive.so/">https://cohesive.so/</a>
3	Lovo	A service for voice operations, including generating voice from text and online video editing.	<a href="https://lovo.ai/">https://lovo.ai/</a>
4	StockIMG	A platform based on artificial intelligence that allows you to create high-quality stock images, illustrations, book covers, icons, logos, etc. A feature of the tool is the ability to generate images from textual content with the help of artificial intelligence.	<a href="https://stockimg.ai/">https://stockimg.ai/</a>
5	AI Code Converter	This tool helps in converting code from one programming language to another. An indispensable assistant for programmers.	<a href="https://aicodeconvert.com/">https://aicodeconvert.com/</a>
6	Algorithmia	A marketplace for AI algorithms and models that can be easily integrated into a variety of applications.	<a href="https://algorithmia.com/">https://algorithmia.com/</a>
7	Deepgram	A deep learning-based speech recognition system for audio and video transcription.	<a href="https://deepgram.com/">https://deepgram.com/</a>
8	BrandBirdApp	A tool that allows you to turn screenshots into attractive graphics or 3D layouts in a unified style that matches your branding.	<a href="https://www.brandbird.app/studio">https://www.brandbird.app/studio</a>
10	AIseo	A platform that helps you create content with correct style, spelling and grammar.	<a href="https://aiseo.ai/">https://aiseo.ai/</a>
11	Clara Analytics	A system that uses artificial intelligence to analyze insurance cases and automate the processes of managing insurance claims.	<a href="https://claraanalytics.com/">https://claraanalytics.com/</a>
12	SnatchBot	A platform for creating chatbots that use artificial intelligence to automate interaction with users.	<a href="https://snatchbot.me/">https://snatchbot.me/</a>

The branding elements of the non-governmental organization “Dyvo” modeled using AI-based tools confirm the effectiveness of artificial intelligence in the field of marketing. We have verified the efficacy of generating text, graphic and audiovisual content required by a non-governmental organization. The advantage was the ability to consider the distinct attributes inherent to non-governmental organizations:

- emphasizing the mission, regional context, and target audience characteristics within the generated content;
- develop unique symbols;
- create an information product according to the topic of the non-governmental organization’s activities.

The experience gained will make it possible to scale these processes for the further activities of both the public organization “Dyvo” and analogous organizations worldwide. The tested tools ChatGPT, Fiverr AI Logo Maker, Telepothq, HeyGen, having proven their effectiveness, can have practical application in marketing.

**Conclusion.** The implementation of AI services in the management of the non-governmental organizations leads to significant positive changes. Automation of routine tasks, data analysis, optimization of finances and the use of voice interfaces contribute to the release of time and resources for more strategic planning and decision-making.

Deep analysis and forecasting using machine learning gives public organizations the tools to effectively respond to change and improve engagement with the public. Thus, in this article, we presented options for using AI services in the management of the “Dyvo” organization. In the course of our work, we created:

- logo of the organization;
- site design;
- site code,
- advertising information about the organization;
- slogan.

Thus, the use of AI services in the management of public organizations leads to significant improvements, as well as automation of routine daily tasks. But it is worth noting that it is also important to consider ethical aspects and ensure data security during the implementation and use of AI, ensuring a balanced approach to the use of these innovations in the field of public administration.

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