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## **WEB DEVELOPMENT AND DESIGN TRENDS IN 2024**

The effectiveness of any site or application, to a greater extent, depends on the quality of its design. The field of design is developing rapidly: Previous trends are losing their relevance, and new ones are emerging instead. To attract the attention of new customers, leave behind their competitors, and create new spectacular and, most importantly, effective websites, every designer should always carefully monitor the current trends in this area. In addition to a good web resource, every specialist needs to improve and update it constantly. The new trends in web design in 2024 will change our understanding of mobile and computer applications, help reform them, and make them more interesting and functional.

The main trend is minimalism. Minimalism is quite popular in all spheres of our life. The basic principles remain cleanliness and simplicity. The main goal is to eliminate unnecessary details and focus the user's attention only on the most important. In this direction, smooth lines and geometric shapes are used for symmetry and harmony. The colour gamut is usually monochrome with a small number of accent colours. In a minimalist design, all details must be freely placed, and the interface must be user-friendly and easy to use. One of the best examples of minimalist web design is the Apple website, made in black, white and silver, takes up a lot of space, uses high-quality images and does not distract the user's attention from trifles.

Dark mode – style and comfort. The dark mode of the site, as well as minimalism, also remains in trend for a year. It looks quite stylish and helps the user to relieve eye strain with long-term use of gadgets, especially in a dark environment. Also, this kind of saves battery power on devices creating the effect of contrast and visibility.

Animation is a modern business card of the application. Animation and interactive elements in web development are increasingly gaining popularity. Users like it because it creates the effect of real "live" communication between people and the system. The most popular type is microanimation. It is used for buttons, links, sliders, icons and more. The function is quite simple, to push the user to specific actions, such as writing a comment and spreading a

post. Another modern type is morphine or smooth transitions. This effect is based on the smooth and continuous transformation of one element into another. This result looks very cool and will attract the attention of anyone.

Also, every foundation for designers and users is flexibility and efficiency, so web development is important in the it world. As well as web design, it is developing rapidly and new trends and trends are emerging. One of the popular trends in web development is augmented reality (WebAR). It is closely related to animation and virtual reality. Brands such as Sony and Microsoft compete with each other and use augmented reality to introduce the user to their products in more detail and to shift the commitment to their side. For example, you can explore the controllers of both gaming systems in detail and choose the most suitable for you. DR is not just marketing: In addition to marketing advantages, augmented reality can significantly reduce costs in other areas of activity. For example, DR leads to another interesting trend in web development – gamified design.

Gamification uses the principles of design and mechanics of games to make websites, mobile applications and other products more interesting and motivating for users. It allows you to learn something new quickly and easily. A common example of gamification or gamified design is the development of learning platforms in a playful way. Its essence lies in the use of game mechanics, aesthetics and dynamics to stimulate the desired behaviour of users. The key aspects are dynamics (use of scenarios that require constant attention and user response), aesthetics (creating a visually appealing and exciting gaming environment), mechanics (application of game elements such as virtual rewards, statuses, and virtual goods). Stimulate achievement and progress through gameplay mechanics. Gamification is not just a game. It is a system that uses the principles of game design to make any interaction with the world of digital possibilities more interesting, exciting and motivating.

Technology does not stand still, and our way of interacting with it is also changing. Voice user interfaces (VUI) are becoming increasingly popular, offering an intuitive and convenient way to manage devices, get information, and immerse yourself in the world of digital capabilities. VUI is a revolution in interaction with computers and gadgets. VUI uses two key components, speech recognition, the system "listens" your voice and converts it into text that the computer can understand. The first example is Siri, created by Apple, it can quickly and efficiently find information on the Internet, and your phone and even connect your iPhone to another device. Voice search is a dynamically developing sphere with unlimited potential. With the development of speech

recognition and speech synthesis technologies, VUI will become even more advanced and convenient.

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### **THE RISKS ASSOCIATED WITH ARTIFICIAL INTELLIGENCE**

Artificial Intelligence (AI) plays a pivotal role in modern technological advancements, bringing substantial improvements in many aspects of our lives. However, alongside its apparent benefits, there are significant threats that need to be considered.

A primary concern with AI is the need for large volumes of data for training, creating the risk of sensitive information leakage, as seen in the cases of Facebook in 2018 and Equifax in 2017. Moreover, AI can be maliciously used for large-scale cyberattacks, exemplified by the Russian hacker group APT29.

AI also facilitates the development of malicious software and fake news using technologies like Deepfake, posing a threat to the spread of disinformation. Another issue is the amplification of biases and discrimination through AI networks trained on biased data, especially in facial recognition systems.

With the automation offered by AI, job losses in various sectors are possible, leading to economic and social challenges. Additionally, over-reliance on AI makes our society vulnerable to cyberattacks and technical failures.

There is considerable concern over the potential loss of control over advanced AI systems, particularly those capable of modifying their own code. Another worrying trend is the use of AI in military applications, such as creating autonomous weapon systems, which could increase the destructive potential of warfare and impact global stability.