

## USE AI TO IMPROVE THE USER EXPERIENCE (UX)

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### ABSTRACT

Artificial intelligence is specifically being used by the digital transformation sector to enhance user experience. Today, artificial intelligence (AI) is used across all corporate sectors and industries to automate processes, boost productivity, and cut costs. This applies to the digital transformation industry as well, which leverages AI to enhance the experience of users. Some effects of artificial intelligence on user experiences, efficient UX processes that can be improved by artificial intelligence, ways that artificial intelligence can support UX designers, and potential future effects on UX design products.

Keywords: Artificial Intelligence, Artificial Intelligence Impacts User Experiences, Thinner User Interfaces, Visual Effects, Data Analysis, UX Design, Analysing Data Efficiently, Measuring and Improving User Experience, HCI.

### I.INTRODUCTION

Product design combines form, functionality, properties, and visually pleasing appearances. The user is presented with features and functionality by UX design in a way that makes the finished product simple to use. Therefore, the purpose of UX design is to help users achieve their end goals as quickly and easily as possible as well as to address their problems.[1] The concentration of User Interface design, a sub field of UX design, is the visual presentation of the application, including the text color, text readability, and interaction convenience. The primary goal of design is to persuade users to make wise decisions when utilizing the developed user interface. When using the application, this entails setting up all the

circumstances that would enable users to follow a specific order of steps with ease.

Analyzing existing equivalents in the real world, focusing on user needs, and supporting the right business model are the first steps in designing the user experience of a learning app. UX designers would be able to by comparing these equivalents to future applications.

- Identify the appraised things' weak and strong points.
- increase their knowledge about the target group and the topic
- develop their concepts and their own vision for a project.

The objective is to comprehend the user's actions, objectives, requirements, motives, and the environment in which they would utilize the product.[2,3]

All facets of a user's interactions with such a product are assessed as part of the user experience. The objective is to comprehend the user's actions, objectives, requirements, motives, and the environment in which they would utilize the product. Contrarily, UI design places a strong emphasis on facilitating user interactions with a system, which has a significant impact on the user experience. The following are necessary for an effective UI design implementation: User interactions with the application are made simpler. The user experience is improved when users can accomplish their goals more quickly.

Color has a purpose in the application. The user's activities with the system determine the colours they see. The user's attention is drawn to certain areas and the distinctions between them are highlighted by color.

Dialogic design is a technique that simulates discussion with users in order to get information from them. In comparison to form design, this strategy may be a much better way to collect data from the user.[4,5]

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## II. THE EFFECTS OF AI ON UX

Enhancing user experiences is now possible thanks to developments in artificial intelligence and machine learning. UX designers and artificial intelligence, or machine learning (ML), have some overlap in their roles. Both of them collect data, analyze user interactions, and forecast behavioural patterns in people. The use of historical data by automated self-driving cars, Video Teller Machine (VTM), delivery drones, chatbots, Alexa, Google Translate, Apple Siri, and ChatGPT are very leading products of AI. Enhancing user experiences is now possible thanks to developments in artificial intelligence and machine learning. Let's examine some of how artificial intelligence is affecting how people use products. [6,7]

### i) Thinner User Interfaces

Less complicated user interfaces make it easier for people to browse and explore a website or application. AI can anticipate user behaviour or queries utilizing historical data and provide a likely response or relevant results. The advance of AI technology has empowered products to arrange user requirements. [7]

### ii) Automation

There are many monotonous, inconsequential jobs that must be finished, yet doing so demands human attention. Examples of the kinds of jobs that artificial intelligence may automate include image cropping, colour correction, and image scaling. Without the need for any human involvement, AI creators have created bright technological solutions that can complete all of these tasks. For instance, the stitch feature in Adobe can identify patterns in photographs and help designers put them together. [2]

### iii) Flexible Design Structures

A design system provides recurring themes, modules, and elements that collectively explain the visual identity of a specific brand or product. Companies like Salesforce, General Electric (GE), Airbnb, Google, and numerous others have established design systems that UX creators can use to give their clients or users a dependable, beautifully designed user interface. Due to the use of Artificial Intelligence or

machine learning. These systems may collect and examine metrics that assist product teams in comprehending how every user interacts with the various components of a user interface. The better a design system recognizes what is working and what is not, the more it may optimize its modules to deliver superior UX results. [1]

### iv) Visual Effects

Many applications, including Auto draw, Artist, and Prisma, have been created using AI technology for human face recognition as a result of one AI developer's innovation. Additionally, users can blur and add shadows to pictures of people's faces. [2]

### v) Personalization

Another AI-driven element that has dramatically enhanced the user experience is personalization. User efficiency can be increased and the experience can be improved with personalized user interfaces. Artificial Intelligence-Powered UX Processes Artificial Intelligence, also known as machine learning, is now able to power UX processes in the design industry, including everything from data analysis to producing design deliverables. Artificial intelligence is primarily used to lessen the demand for human attention. Artificial intelligence, also known as machine learning, is now able to power UX processes in the design industry, including everything from data analysis to producing design deliverables. As a result, UX designers can use AI to improve the UX creative process and the user experience. [6,8]

### vi) Data Analysis

Artificial intelligence is capable of analyzing vast quantities of information to find patterns and produce insightful UX investigate findings. The creation of questionnaires by artificial intelligence, for instance, could be used to gather information from users and analyze it qualitatively. (Users who need to conduct qualitative data analyses can also get pertinent answers from artificial intelligence.) [6]

### vii) UX Design

Although UX design is a creative stage of creation expansion, Artificial Intelligence has a big impact on design. To create flow diagrams, you can use various algorithms based on previous user data patterns.

### viii) Wireframing

AI can create wireframes from a flow diagram even with identical slight information. Artificial Intelligence can quickly create detailed wireframes for an entire application once it comprehends the context and the flow. To satisfy particular product requirements, the UX designer only needs to edit or customize the wireframes.

### ix) Testing

In training for A/B or multivariate testing, AI can create multiple iterations of a UX design resolution, then regulate which one performs the greatest. The Benefits of Machine Learning for UX Designers Artificial intelligence could provide possibilities for UX designers., which will aid them in making decisions more quickly. For a long time, designers and developers have been able to use automation in their work on product and application development. So, we should thank the development of Artificial Intelligence and machine learning.

### Making Decisions

UX designers can be given options by artificial intelligence, which will aid them in making decisions more quickly. Because they present users with the fewest options possible and are based on historical datasets, machine learning predictions facilitate quick and simple decision-making.

### x) Developing Relationships with AI and Humans

Siri and Alexa are excellent examples of how humans and AI can coexist. Artificial intelligence can accurately predict human behavior after collecting and analyzing vast amounts of data from users, which promotes the development of human-AI relationships. Human-AI bonding is a tool that UX designers can use to enhance the user experience throughout the creation of applications. [3]

### xi) Effective Data Analysis

User interfaces are created by UX designers in part using data investigation. Artificial intelligence could analyze vast quantities of information and produce useful results if you gave it the same task. Any user experience would be enhanced if it was developed following the analysis of enormous volumes of data. This analysis can be quickly

completed for you by artificial intelligence. Consider how your users would find the products you design and create after studying a lot of user data. [4]

### xii) Distributing Value to Users

An AI-powered app prioritizes meeting users' specific needs. Artificial intelligence can be programmed to produce excellent results and the best user experience. A product that offers your users and customers the most valuable leads to a successful business. Could UX Design Jobs be Replaced by Artificial Intelligence? By helping them to manage and design customer services, Artificial intelligence can reduce the time and effort required by UX designers. Artificial intelligence's goal is to help people with their daily tasks by increasing their productivity and efficiency. Artificial intelligence can assist UX designers in creating individualized user experiences that meet the needs of different users. Additionally, by helping them manage and design customer services, UX designers can save time and effort by using artificial intelligence. Because it is still a young phenomenon. [4,7]

## III. CONCLUSION

I initiated this investigation with the goals that shed light on how AI can improve user experience and UX design. The future of user experience design and Artificial Intelligence appears to be highly promising. Therefore, it is up to companies and product developers to utilize AI technologies that can improve products as effectively as possible. My research paves the way to introduce a new methodology to improve AI with UX efficiency for high product delivery.

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