



HOW TO BUILD AN AI APP?



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History knows a large number of the milestone events that impacted or altered the course of life and gave a boost to the human development curve. Still, we feel the impact of the widespread digitalization, which, undoubtedly, has taken business processes to a new level. Artificial Intelligence is another wave of technological breakthroughs that has almost penetrated many corners of our lives, starting with simple discourses and ending with bright ideas on how AI implementation can improve business performance and bring benefits. In the following article, we will analyze all aspects concerning AI app development.

What is Artificial Intelligence?

Artificial Intelligence (AI) is a branch of computer science that constructs machines and computers with the ability to cope with cognitive tasks, imitating humans' behavior in gradual learning processes, and dealing with particular issues. Artificial intelligence capabilities are broad enough and involve language processing, speech recognition, identifying patterns, playing games, writing codes, driving cars, and so on. AI processes huge amounts of data, detecting patterns, resulting in quick decision-making and making predictions. The much-talked-of ChatGPT examined as much information from different sources like Reddit, Wikipedia, and books as an ordinary human being is able to continuously read in 50 years. Now, we guess, you clearly see the demonstration of enhanced productivity.

AI Market Overview

The amazing abilities of AI-integrated technologies are supported by the big numbers circulating in the market. The global artificial intelligence market has reached [£113.47 billion in 2022](#) and will obviously expand. For example, a compound annual growth rate (CAGR) is projected to be [37.3% during 2023–2030](#), with value indicators climbing to £1,322.11 billion. Such a behemoth as Meta has turned away from Metaverse projects and now concentrates its efforts on AI generative language. [According to statistics](#), 91.5% of leading companies put money into AI on a constant basis, while 83% of businesses are convinced that AI is of paramount importance in their future work plans. Microsoft, Alphabet Inc., Amazon, and many other companies participate in the race to claim the AI market leader. Artificial Intelligence is a revolutionary element, helping businesses succeed and become better and closer to their customers.

How is AI Used in Mobile Apps?

Honestly, there are dozens or even more ways to implement AI technologies in your business. You can create a brand new app powered by AI that will be aimed right at your needs or incorporate AI into an existing app, accelerating its total performance.

Chatbots

This is the first thing that comes to mind. In fact, it is really one of the most popular uses of artificial intelligence, which enormously helps businesses reduce operational costs. Such tools enable you to be in touch with your customers 24/7 and provide them with a hassle-free experience and natural language processing.

Digital Assistance

It is a companion that frees your hands and enables you to save time and effort. [97% of mobile users](#) are using AI voice assistants. Siri, Alexa, Cortana, and others recognize your speech and follow the commands. That allows you to solve problems even if you forget where your smartphone is. The voice recognition option can be embedded into your app, enhancing the interaction between your app and your customers. A separate word should be said about people with disabilities that effectively benefit from digital assistant cooperation.

Security

In the days when fraudulent activities became so common and nearly [39% of UK companies were attacked in 2022](#). With an average of 65,000 daily attacks, it becomes crucial to use machine learning technologies to protect data and the whole company's system. AI biometrics add a particular level of security to your app as they strengthen authorization processes. Another use of AI is constant data processing that helps find suspicious action patterns and detect anomalies in the system or transactions.

Predictive Analytics

As AI quickly operates with huge data sets, it easily recognizes trends and regularities. On the basis of such analytics, AI constructs predictions about a user's behavior, financial indicators, or risk assessment.

Personalization

We guess you have already experienced the way AI can personalize content—for example, Netflix movie recommendations. The next example is [Spotify](#), which has recently launched a brand-new AI DJ for users to dive deep into the right music at the right moment. Such methods create users' unique experience and let them feel special.

What are the benefits of AI mobile apps for business?

Now let's see how your business can benefit from AI app development. Here are some of the AI implementation advantages.

Improved operational speed

While a human solves one mathematical problem in five minutes, AI needs only one minute to solve ten problems. That enables businesses to make decisions faster and get less stuck on repetitive tasks.

Efficiency and productivity improvements

AI algorithms analyze consumer behavior and make forecasts of future trends. That leads to strong sales, drives customer engagement, and boosts retention rates. As a consequence, you improve your ROI and enhance performance. [82% of early adopters](#) of AI technologies claim a positive ROI from their efforts.

Quality user experience

By relying on AI behavioral analysis, businesses can differentiate their audiences more accurately and offer better customer service. AI constantly notices the way a user interacts with the app and draws conclusions about what content is more suitable.

Reduction of human error

Autonomous cars are expected to slow down traffic jams and decrease the number of accidents because they will work in a controlled environment. That will reduce human inattention, driving while intoxicated, and many other issues caused by human errors.

What Industries Can Benefit from AI Apps?

It is hard to find a sphere where AI won't add value. The whole world step-by-step switches to the side of automation and already benefits from it. Here are some examples of the industry that are affected by AI app implementation.

Financial Services

AI financial apps keep recording daily spendings gathering all data into statistics and suggesting insights for wealth management. Chatbots for constant contact between banks and clients, notifications about suspicious activities. [J.P. Morgan Chase widely uses AI algorithms](#) to mark dubious transactions for further investigation.

Healthcare

With increased tasks and the amount of data falling on the shoulders of the healthcare providers and physicians, it is the right decision to outsource a part of daily routine or even more serious tasks to AI-powered software. AI apps can select optimal treatment on the basis of personal information and identify the disease using health indicators data. AI helps to improve the efficiency of medical research, for example, [analyzes cell images](#) to identify whether the drug was effective.

“AI algorithms are increasingly being used to enhance the development of tailored treatments (cell and gene therapies) for individual patients, through integration and analysis of large amounts of phenotypic

and molecular data to identify markers of disease for which targeted therapeutics can be developed. This can lead to more effective therapies, that are in some cases curative, reduced side effects, and, most importantly, improved patient outcomes. At Unison, we're working with an early stage startup by providing federated infrastructure for machine learning (ML) model development. The startup, founded by a renowned geneticist and serial entrepreneur, is developing ML models that will optimise and enhance gene therapy development.”, says **Rory Popert**, Research Tech lead at Genomics England, Co-founder of Unison, an omics data federation platform provider, and founder of Morpheus AI, a think tank focused on advancing ML application in personalised medicine.

Logistics and Transportation

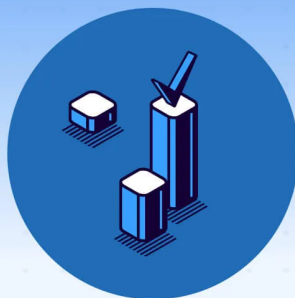
AI-powered robots bring the order and pack products in warehouses, AI apps are able to optimize transportation routes choosing the quickest one and provide last-mile delivery. In the foreseeable future autonomous vehicles will be ubiquitous, causing operating cost-cutting. You may install cameras with computer vision to control shelf status if they are empty and need to be restocked. The Fujitsu company uses an AI model to find deviations in products such as frayed threads and scratches.

What are the Benefits of AI Mobile Apps for Business?

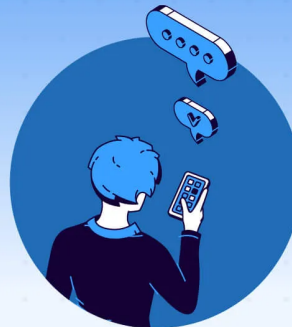
Improved operational speed



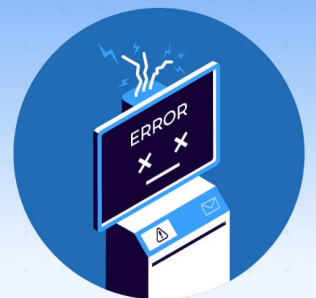
Efficiency & productivity improvements



Quality user experience



Reduction of human errors



Top Artificial Intelligence Apps

Virtual Assistants

[Siri](#), [Google Assistant](#), [Amazon Alexa](#), and [Microsoft Cortana](#) are some of the most popular virtual assistant applications that operate on AI algorithms to complete tasks like scheduling meetings, sending messages, and finding answers.

Language Learning

[Duolingo](#) and [Babbel](#) use AI in order to customize language learning processes and pick up appropriate levels according to users' needs and preferences. Moreover, learners can easily hone their skills in conversation with chatbots.

Health and Fitness

[MyFitnessPal](#) uses AI to give customers individual guidelines on nutrition and exercise individually according to their purposes and habits. Binah.ai is another AI app that helps people assess their health just by using the cameras on their smartphones.

Travel

You need to install the Hopper app to catch cheap flights. It uses AI algorithms to predict the price curve and send you notifications when prices fall. [iPlan.AI](#) will help you create the perfect route for any city in keeping with your wishes.

News

The New York Times and The Washington Post use AI to improve news personalization for their readers, based on their previous experience and reading interests.

Social Media

TikTok's AI algorithms recommend users suitable content based on their browsing history and interactions. Facebook, for example, uses an AI tool known as "deep text" to detect cases of abuse in comments.

Photo and Video Editing

Adobe Photoshop and Lightroom have implemented AI to provide such tools as selecting objects, one-click editing, and removing backgrounds.

Banking and Finance

[Mint](#), a budget planner and tracker, powered by AI algorithms, analyzes customers' flows of money and their habits and gives advice on how to optimize and manage their budgets correctly.

AI Trends

Artificial Intelligence in itself is a big trend that broke out in 2022, but still inside the big AI stream, there are some branches that deserve your special attention.

Natural Language Processing (NLP)

NLP is a branch of AI technology that helps computers understand and interpret the way people make language and handle it. NLP has found a wide application in such tools as chatbots, virtual assistants, and apps for language translation.

Computer Vision

Computer vision is a subfield of AI that allows machines to gain and understand information from the visual world (images and videos). Applications with facial recognition options and object detection features use computer vision. It is also necessary for the creation and operation of autonomous vehicles.

Edge AI

Edge AI implies the process of performing AI local computations either on the device or the nearest server instead of handling them in the cloud. Such a model can reduce waiting time, improve app performance, and increase data security. Edge AI technology is commonly used in autonomous vehicle creation and IoT app development.

Explainable AI (XAI)

Explainable AI, or XAI, is able to explain its decisions and actions. Enhanced transparency serves to improve AI performance by making its logic more understandable. It is crucial in such spheres as healthcare and finance.

AI-powered Cybersecurity

One of the latest trends is to make AI capable of fighting cyberattacks by detecting and preventing them. AI can analyze large amounts of data and discover dubious patterns and anomalies.

AI Ethics

One of the most challenging issues with AI is considering the ethical side while structuring algorithms and doing AI training. The use of AI technologies should be for the benefit of humans, which is why it is so important to establish certain rules and guidelines about the right outcome of the AI development process.

How to Build an AI App: a Step-by-Step Process

Whether you have decided to develop an AI app, here is a six-step guide to the details of this process. Remember that it is possible to use AI APIs instead of creating your own AI algorithms. They work on the basis of the existing ones, such as ChatGPT or IBM's Watson. This will significantly simplify and speed up the development process, though it still will need some excellent technical expertise.

1. Define the Problem and Use Case

The chances for your success go up significantly if you have clearly outlined the problem your app is going to solve, your target audience's need that you will satisfy, and enumerate all use cases for your app. List carefully the requirements of the industry, peek at the projects of your competitors, and think about the sources for training your AI algorithms.

2. Collect and Prepare Data

The quality of the output depends on the data that is used for AI training sessions. Gathered information should also be prepared in a special way depending on the type of AI learning process. Ensure that it is consistent with your purposes, free of unnecessary data, structured, and labeled.

3. Select Algorithms and Train Models

Choose appropriate machine learning algorithms (mathematical instructions) according to your project goals: will it predict trends, recommend suitable products, or recognize patterns of diseases? And then start progressive training of your ML model by splitting the information into small sets and repeatedly enhancing AI performance and accuracy.

"Machine learning models can analyse massive amounts of phenotypic and molecular data to predict individual health problems before they manifest. Ultimately, this predictive capability will enable healthcare providers to take proactive measures in disease prevention and management, improving individual patient outcomes, and , ultimately, population health. Polygenic risk scores aren't new, but AI application in this same context will, in time, lead to more accurate predictions across a much broader baseline of known genetic markers associated with health conditions and disease", adds **Rory Popert**.

4. Develop the App

Pay enough attention to app development itself, as it also requires a special technological stack to be able to integrate the machine learning models. Create intuitive, appealing design because it plays an important role. One reason for the success of ChatGPT is its simple and user-friendly design. You can put such issues on Magora's shoulders and profit from our solid experience.

5. Test and Optimize

The next step allows us to check the app for compliance with initial plans and expectations, along with its technical standard and performance. Otherwise, the app goes back for further development or optimization.

6. Deploy and Monitor

Finally, it is time to deploy the app to your target audience. However, the work doesn't stop at this point. Always maintain app operation and check for errors. Collect feedback from users and think about continued improvements such as adding new features or updating AI algorithms.

How to Build an AI App: a Step-by-Step Process



How Much Does it Cost to Develop an AI App?

In order to provide you with the most honest answer to this question, we'd better describe the factors that directly influence the cost of your AI app development. For more accurate estimates and some advice on the project, you can contact us at any time.

1. AI App Complexity

In their majority, AI apps complete narrowly focused tasks and, as a result, don't have too sophisticated a mechanism at their core. It is another story if you plan to build a company's AI ecosystem. Anyway, AI app development is more challenging than traditional app development because it inevitably has some time-consuming and costly issues. For example, data selection and its further preparation or even transformation may require a lot of resources from your AI app development company. The more data you plan to process, the higher your expenses will be. It is worth noting that the AI algorithm's accuracy is also one of the factors that increases the project's cost. Moreover, model training is a large-scale process itself and needs specialized hardware.

2. App Development Team

Your app development team's size, location, and professional level will affect the final project sum. Hiring a reputable outsourcing app development company is the best choice to achieve your goals and create high-quality products with guarantees against poor results and disappointment. Developing the app itself can also result in significant expenditures, and a dignified app development company will share tips and experience on how to keep costs down and archive a faster ROI.

3. Deployment and Maintenance

It is good to budget the cost of app maintenance, as maintaining a stable operation will earn you a good reputation and attract satisfied customers. Over time, new technologies will inevitably need improvement, as trends always change, and businesses need to keep a pulse on them.

Overall, the cost of AI app development can range from tens of thousands to millions of dollars, depending on the scope and complexity of the project. Magora is an experienced and trustworthy app development company that provides you with different strategies on how to achieve an efficient outcome depending on the time and budget you have. Upon our consultation, you will get an accurate estimate of the cost and timeline for your project.

How Magora Can Help with AI App Development

[Magora](#) is a cutting-edge IT company that specializes in AI app development. With a team of highly skilled and [experienced AI developers](#), the Magora team is dedicated to delivering innovative and custom AI solutions to businesses and organizations of all sizes. Due to our expertise in AI technologies such as machine learning, natural language processing, computer vision, and predictive analytics, we create AI-powered apps that can help you automate business processes, improve

customer service, and drive growth. Magora also provides comprehensive support and communication throughout the app development lifecycle, from concept creation to launch and maintenance, ensuring that our clients receive the highest-quality AI apps that are sharpened by their specific requirements. We are always stepping up the skills in our work with the latest innovations, quality delivery, and collaboration with customers. Magora is a trusted partner for businesses that are seeking to involve the capacity of AI in their digital transformation.

FAQ

What is AI app development?

AI app development is the creation of mobile applications with implemented artificial intelligence (AI) technologies, such as machine learning, natural language processing, and computer vision. AI apps are designed to address the issues that would in general require human intelligence, including speech recognition and data analytics.

What are the benefits of developing AI apps?

There are numerous advantages to developing AI apps, for example, the delegation of tasks through their automation, improved decision-making, and customized approach to users. AI apps can also help businesses gain insights from data and streamline their daily routines for greater efficiency and cost-effectiveness.

What are the challenges of developing AI apps?

Developing AI apps can be challenging due to the novelty and complexity of this technology. Moreover, app development processes require high-quality data. Ensuring the accuracy and reliability of AI models, compliance with data privacy regulations, and ethical considerations are the test of strength for your app development company.

Final words

Artificial Intelligence app development is a promising branch with strong growth potential. Nevertheless, it is necessary to consider possible risks, evaluate business capacities, and identify the problem that will be solved with an AI-powered app. While some wonder if AI will steal their jobs and worry about AI necessity, others benefit from AI app deployment and break new ground in business performance. Magora is always ready to discuss your app development idea and build close collaboration to put the concept into practice the best way possible.

And if you need some development support, here are links to some of our services:

Need more information about our services? Here are some links:

[Top App Ideas for Startups to Make Money in 2023](#)

[Web App Development Cost in 2023](#)

[AI & ML Development Services](#)

[How to Hire App Developers in 2023](#)