An important development in machine learning is deep learning. Deep-learning algorithms use statistical techniques to develop a model to solve problems from large, complex datasets with very little guidance from programmers. As computer scientist Amit Karp writes, “deep learning relies on simulating large, multilayered webs of virtual neurons, which enable a computer to learn to recognize abstract patterns.”11 It is called “deep” because it automatically generates multiple layers of abstractions of the data and uses these abstractions to identify patterns. As deep learning and other machine-learning techniques continue to improve, they will bring significant benefits to individuals and societies along the way.

Because AI will continue to evolve and work its way into a wide variety of applications,

it is difficult to predict just how much value AI will generate

AI can help businesses make smarter decisions

develop innovative new products and services

boost productivity to drive economic value

Что мы делаем:

**Помогаем бизнесу внедрять умные технологии на основе искусственного интеллекта**

Разрабатываем собственные инновационные продукты и сервисы

**Ключевые технологии, с которыми мы работаем:**

Распознавание изображений, компьютерное зрение, предиктивные модели, машинное обучение и глубокое обучение

**Территория применения, типы задач, которые есть (тут написать в каких областях бизнес может использовать технологии ии у себя, грубо говоря, в каких отделах):**

Monitoring

AI can rapidly analyze large amounts of data and detect abnormalities and patterns. Because AI can do this far more quickly and accurately than humans—often in real time—AI is very well suited for monitoring applications, such as detecting credit-card fraud, cybersecurity intrusions, early warning signs of illnesses, or important changes in the environment.

Discovering

AI can extract valuable insights from large datasets, often referred to as data mining, and discover new solutions through simulations. In particular, because AI uses dynamic models that learn and adapt from data, it is very effective at uncovering abstract patterns and revealing novel insights that traditional computer programs cannot.25

Predicting

AI can forecast or model how trends are likely to develop in the future, thereby enabling systems to predict, recommend, and personalize responses. Many consumers are likely familiar with these types of applications, such as Netflix’s recommendation algorithm, which **analyzes users’ viewing histories, stated preferences,** and other factors to suggest new titles that they might like.26 Data-intensive applications, such as precision medicine and weather forecasting, stand to benefit from this use of AI.

Interpreting

Until recently, most data analytics has focused on structured data—information that is well organized according to a specific framework, such as a spreadsheet of survey responses. Because AI can learn and identify patterns, it can interpret unstructured data—information that is not easily classifiable, such as images, video, audio, and text. As a result, computer systems are now capable of analyzing dramatically more kinds of information about the world. For example, AI helps smartphone apps interpret voice instructions to schedule meetings, diagnostic software to analyze X-rays to identify aneurysms, and legal software to rapidly analyze court decisions relevant to a particular case.27

Interacting with the Physical Environment

AI can facilitate a diverse range of machine-to-environment interactions that allow autonomous systems to directly engage with the physical environment. In particular, AI enables robotic systems that can navigate and manipulate the world around them. For example, autonomous vehicles analyze huge amounts of real-time data from an array of sensors, cameras, GPS systems, and maps to determine a safe and efficient route down a street.

Interacting with People

AI can allow humans to interact more easily with computer systems. Humans typically interact with machines by adjusting their behavior to meet the needs of the computer, such as by typing on a keyboard, pressing a button, or adjusting a dial. With AI, humans can interact with computers the way they do with other people, as computer systems can respond to speech, gestures, and even facial expressions. For example, individuals can ask questions of AI-powered chatbots by having a conversation or beckon a robot to come over with a nod or wave.

Interacting with Machines

AI can automatically coordinate complicated machine-to-machine interactions. For example, a control system for a data center can use AI to continuously monitor computing activity, internal temperature, and environmental conditions, and make adjustments to cooling systems to optimize performance while minimizing energy costs.28 This ability also allows for multiple separate AI systems to coordinate with each other, such as a fleet of autonomous trucks managing themselves in a platoon formation to reduce fuel consumption, or autonomous robots in a warehouse that communicate with each other to sort and retrieve items.29

**Применение в индустрии:**

Изменяя отрасли экономики, профессиональные области деятельности:

categories: accessibility; agriculture; business operations; consumer convenience; disaster prevention and response; education; energy; environment; health care: prevention and screening; health care: treatment and monitoring; industrial operations; public safety; social good; and transportation.

**Наши решения уже работают:**

Тут можно написать в каких конкретных областях мы уже что-то сделали

**Примеры кейсов:**