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AUTONOMOUS HOUSE

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Ukrainian startup “Autonomous House” is a thirst for freedom.

Every year the number of people on the globe grows. The question is not only “where do people live?” The question of whether there are enough resources on Earth to ensure the comfortable living of mankind is very important. The idea of saving resources has also become very fashionable today. This includes the reuse of things and substances. Ten years ago, a house independent of electricity, sewage and water supply was considered science fiction. And now it is the result of the work of Ukrainian enthusiasts. A completely autonomous house is a product of the Ukrainian startup Haus.me. The Ukrainian team is developing the latest engineering ideas for detached houses. The founder of the Ukrainian startup Haus.me is Maxim Gerbut.

The use of traditional gas and coal has a greenhouse effect and is very harmful to the environment. Experts from the International Energy Agency predict a doubling of global energy consumption by 2030. So, it is time to find new energy-efficient solutions, including in construction. The first prototypes of such houses appeared in Germany, Canada and the United States. The house is made using frameless technology of composite fiberglass, stronger than steel. But it is much lighter and more elastic. It also has good thermal insulation and seismic resistance. A wall that is 23 centimeters thick retains heat like a brick wall that is 9 meters thick. The house has a tank for 2 tons of water generated from the air. The water filtration system uses reverse osmosis to provide housing with drinking water. Additionally, water supplies can be replenished by a special installation that condenses moisture from the air. The

shower circulates water, which saves 80% of the resource. The house is equipped with recuperative ventilation. The used air heats the cold fresh air that enters the room. This saves up to 95% of energy compared to traditional ventilation systems.

The house uses not only solar power but also the energy of the human body. During the conversation, one person emits 0.15 kWh of heat. If there are six people in the house, they produce all the energy needed to heat the house. During frosty weather (at -20° C), the house spends 0.86 kWh per day. This is 6.5% of the power of solar panels on the roof of the house. In cloudy weather, solar panels run at a quarter of their power, so they use batteries. The house is powered by lithium ferrum phosphate batteries with a life of 10 years for 5000-7000 cycles. Such significant savings are possible due to super-insulated walls and patented warm windows, the thickness of which is 25 cm. The windows are made seamless and without frame, so heat loss is minimal. Special software is important. It competently redistributes energy between all systems of the house. All this allows a smart home to consume less than one kW of energy per hour – four times less than a certified passive house.

The cost of a small house in Ukraine is 80-100 thousand dollars. Of which 50,000 is the cost of the case, and the rest – the cost of furniture, electronics and appliances. “Haus.me is a completely finished product. A person buys it as a yacht – with furniture, appliances, linen, and utensils. You just put it on the lawn and live,” says its creator, Maksym Gerbut, about his startup.

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PROSPECTS OF ARTIFICIAL INTELLIGENCE

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Artificial intelligence is, first of all, the property of intelligent systems to perform creative functions, which are traditionally the prerogative of man. Unfortunately, today intelligent systems have a fairly narrow field of application. Programs that can beat a person at cards or chess cannot answer the questions, etc. But nobody cannot deny the fact, that sooner or later, artificial intelligence will become an integral part of the technological industry. And with its help it will be possible to solve any, even the most complex problems.

Artificial intelligence is already gradually starting to spread in medicine, the defense industry, as well as in scientific research. Just imagine that in a few years, with the help of intelligent systems, it will be possible to determine the diagnosis without any difficulties and successfully carry out treatment without the presence of a doctor! This can be done using Speech Recognition technology. The technology is a combination of speech recognition and natural speech processing used to describe the symptoms of patients. It will also save doctors the need to record data and automatically create electronic medical records to help doctors work more efficiently.

Artificial intelligence has found tremendous use in the defense industry and continues to develop. For example, aircraft simulators use artificial intelligence to process data from flight simulations. Besides flight simulation, there is also aircraft combat simulation. In such cases, computers can offer the best success scenarios. Computers can also create strategies based on placement, size and speed. Pilots can