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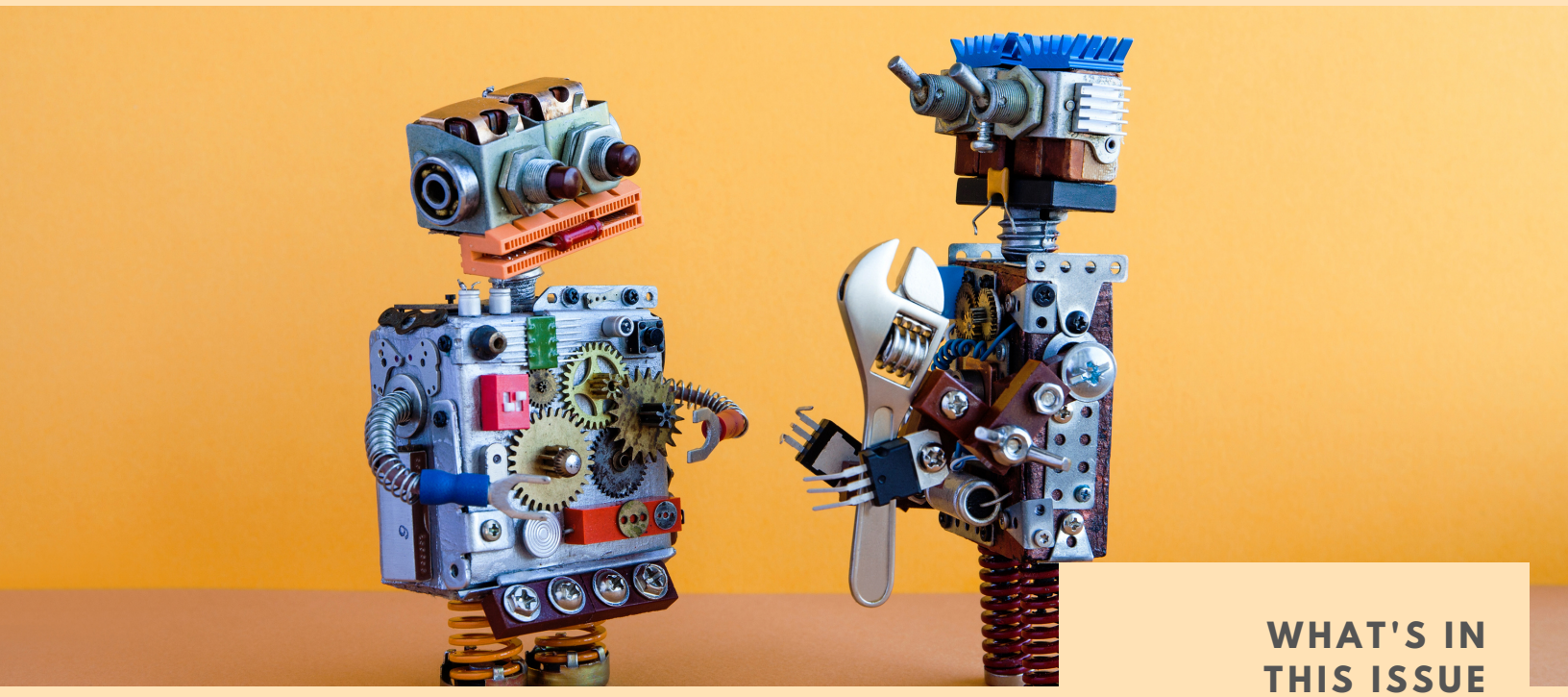
COMPLETE CONTROL COMMUNIQUÉ

Your local guide to building automation



ARTIFICIAL INTELLIGENCE & MACHINE LEARNING IN BUILDING AUTOMATION

In general, Artificial Intelligence (AI) can be defined as machines and computer systems simulating human intelligence processes.[1] By incorporating artificial intelligence into computer programs, a machine uses past and current data to make trends that improve its overall functioning. This process is known as machine learning.[2]

Machine learning and AI technology can assist many different computer programs, from helping Google Translate make more accurate translations to lowering energy costs in commercial buildings.

WHAT'S IN THIS ISSUE

In building automation, artificial intelligence can be very useful for both building and facility managers in way of better controlling their equipment. This leads to a decrease in costs and energy waste. As machines use algorithms that focus on the specific times equipment is used, the amount of energy consumed, and detecting when occupants are present, they are able to accurately predict trends. Thus, managers are able to use this information to analyze their HVAC systems on how to work more intelligently. For example, if a company closes at 9 pm everyday and this data is recorded, the ai can then automatically shut off lighting and air conditioning units until the time of opening. By determining when there are no occupants and when energy will be used at a certain time, companies can save a great deal of money.

An assortment of companies are now developing and offering ai technology that does just this. Some of these companies include PointGrab, IBM, Verdigris, and Bidgely.[4]

Overall, businesses should anticipate the usage of artificial intelligence to grow tremendously in regards to smart buildings.

BRAINBOX

Buildings account for the most energy consumption and Greenhouse Gas (GHG) emissions on Earth. According to Brainboxai.com[3], 45% of a commercial building's energy consumption stems from its Heating, Ventilation, and Air Conditioning (HVAC) system. Furthermore, 30% of this energy is usually wasted.

The fully autonomous AI technology, BrainBox combats this wasted energy and high consumption levels that result in a 20-40% decrease in carbon footprint.

BrainBox uses deep learning— a subset of machine learning— that allows it's AI technology to use human inspired processes (not just algorithms as seen in machine learning) to better perceive data and patterns.[2] Additionally, they use cloud computing and their own proprietary process to create an overall more efficient, smart, and environmentally safe building.

REFERENCES

1. What is artificial intelligence?
2. Artificial Intelligence in Building Automation and HVAC
3. Brainbox Ai
4. AI in Building Automation – Current Applications

INTERNET OF THINGS VIDEO SERIES

Internet of Things (IoT) is a network that interconnects a variety of computing devices, allowing them to send and receive data efficiently. It can be paired with artificial intelligence to make AIoT, which improves human-machine interactions and makes analyzing data faster and easier.

In April of 2021, Complete Control released a three part video series discussing various topics concerning the up-and-coming technology, Internet of Things (IoT). Part 2 of this series, which can be found on our Instagram and LinkedIn pages, discusses how IoT helps humans make decision making and problem solving more efficient.

OUR NEW ADDRESS

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Instagram: completecontrolllc
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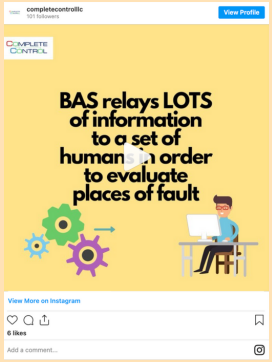
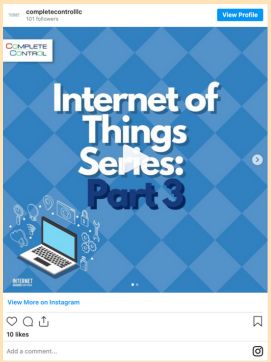
IOT VIDEO SERIES

Explore Part 1 and 3 of the IoT Video Series brought to you by Complete Control, LLC.





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