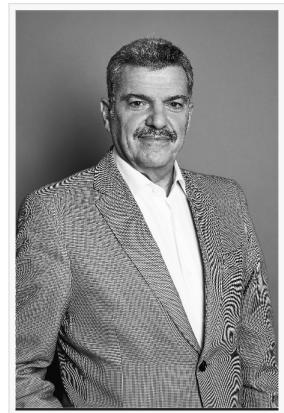


Max El Mann Arazi: Robots That Build, What They Are, How They Work and Why They're Important

MIAMI, FLORIDA, ESTADOS UNIDOS, January 3, 2023 /EINPresswire.com/ -- Image Source: Pixabay In the future, construction is about to get a whole lot easier. New technologies are emerging that make it possible for machines to design and construct anything from roads and buildings to bridges and skyscrapers. These new construction robots can even be programmed to copy human-designed blueprints. They're often referred as "constructionbots" or "robot builders." Let's take a closer look at what these new bots can do, how they work, and why they're so important for the construction industry.

What Are Robots That Build?

A robot that builds is a machine that uses programming, sensors, and actuators to autonomously manufacture products using 3D spatial data and instructions. Robot construction is a subfield of robotic manufacturing, which is the process of creating products using robots. These machines can autonomously create products like buildings and bridges. Manufacturers can either use machine vision to identify the spatial data that need to be



Max El Mann, directivo de Fibra Uno.

programmed, or use sensors to gather information about the environment and the raw materials. Once the data are programmed, the machines can use robotic systems to perform automated tasks, including motion control, sensor control, power generation/distribution, and data control.

Why Is It Important to Develop Robotic Construction?

The construction industry is undergoing a massive transformation. The shift to digital and automated technologies is drastically changing the way buildings are built, as well as how workers are supplied and hired. This transition is necessary to thrive in the future. New technologies are emerging that make it possible for machines to design and construct anything from roads and buildings to bridges and skyscrapers. These new construction robots can even

be programmed to copy humandesigned blueprints. At the same time, the demand for new construction is increasing. As the world's population continues to grow, the demand for housing is also rising. "This can lead to new problems. The construction industry is currently facing an acute shortage of workers, with around 3.5 million workers needed in the industry" - says the expert Max El Mann Arazi.

Current robotic construction technologies

Computer vision - Computer vision is essentially the ability for machines to "see" using cameras. This lets the machines "look" at something and understand what it is. For example, a robotic construction system that "sees"



Max El Mann Arazi

a blueprints can understand what the blueprints are telling it to build. Similarly, computer vision can also be used to understand the current state of something, such as the state of a wall or other object. Machine learning - Machine learning uses algorithms to help robots recognize

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patterns in their surroundings so they can create and recognize patterns in their blueprints. For example, a system that "learns" from examples will eventually be able to "think" for itself. Planning - Planning is necessary to create instructions for the machine to follow. Planning algorithms can create instructions for machines to follow like where to place walls, where to connect electrical systems, and where to place other components of a building.

How the Robot Builder Industry Works

Construction companies have been using robots for the past few years. The robot builders we see today can perform tasks like surveying the environment, mapping out the blueprints, designing, and performing automated construction. There are two primary ways companies can use robots. They can use robots as a service, or they can use robots as part of their own manufacturing process. One of the most common ways companies use robots is to complement human workers. For example, a construction company that designs and builds houses can use robots to perform surveying and mapping work. This lets the human designers create their

blueprints without having to perform these tasks themselves. With the popularity of automation, these companies can outsource designing, surveying, and mapping tasks to robots. As a result, they have more time to focus on more creative tasks that require human creativity.

The Future of Robot Construction Robot construction is becoming more popular as the cost of automation falls. There are many factors that contribute to the future of robotic construction, including the declining costs of sensors, actuators, robotics, and software. In addition, the development of new materials and machine vision technologies has also allowed robots to build more complex and advanced objects. New technologies are also enabling more autonomous robotic construction. Robots that can safely operate on their own are becoming increasingly popular. The market for autonomous construction robots is expected to grow at a CAGR of 26% between 2018 and 2023. Autonomous construction robots bring numerous benefits to building projects, such as less human error, reduced costs, and faster construction. Companies are also investing in developing a wide range of new

Conclusion

The construction industry is constantly evolving, and the need for new construction is increasing. New technologies are emerging that make it possible for machines to design and construct anything from roads and buildings to bridges and skyscrapers. These new construction robots can even be programmed to copy human-designed blueprints. They're often referred as "constructionbots" or "robot builders." Let's take a closer look at what these new bots can do, how they work, and why they're so important for the construction industry.

technologies to make robots even more autonomous.

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