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Anastasiia Katykhina[1], Nataliia Zhukova[2]
[1]student of group CST -112 NU "Zaporizhzhia Polytechnic"
[2]PhD (Philology), associate professor NU "Zaporizhzhia Polytechnic"

ROBOTICS OF THE FUTURE: BOSTON DYNAMICS

Boston Dynamics is a robotics company founded in 1992 that develops and manufactures advanced robots with high speed, maneuverability, and flexibility. The company's robots are known for their ability to move over uneven terrain, climb stairs, open doors, lift heavy loads, and detect and identify objects. Boston Dynamics has made significant strides in the field of robotics, and its products have many potential applications in various industries, from manufacturing and construction to healthcare and logistics.

One of Boston Dynamics' most famous robots is Spot, a quadrupedal robot that looks like a robot dog. Spot can move on uneven ground, climb stairs, open doors, and even dance. The robot is equipped with cameras and sensors that allow it to create 3D maps of construction sites, troubleshoot machines on offshore oil rigs, and perform surveillance and inspection tasks. During the outbreak of the COVID-19 pandemic in 2020, Spot helped hospitals sort patient tests by delivering samples from the testing area to the laboratory. Spot's agility and versatility make it a valuable asset in various industries, from construction and mining to law enforcement and security.

Another well-known robot developed by Boston Dynamics is Atlas; a humanoid robot with its impressive jumping and flipping abilities, Atlas has captured the attention of the public and demonstrated the incredible advancements that have been made in the field of robotics. But Atlas is more than just a showpiece. It is equipped with a range of sensors and cameras that enable it to perceive its surroundings in real-time and interact with objects with remarkable precision. This makes it an ideal tool for complex industrial tasks that require a high degree of accuracy and dexterity.

In 2021, Boston Dynamics announced a new robot called Stretch. Unlike Spot and Atlas, Stretch is not modeled after a human or animal but is designed to be as practical as possible. The robot has a large robotic arm that can grab and move boxes weighing up to 23 kilograms (50 pounds). It is also

designed to be integrated into any existing workstation, making it a versatile tool for loading or unloading goods. Stretch's simple design and practical capabilities make it an ideal choice for logistics companies that need to move heavy loads quickly and efficiently.

Another robot used for logistics purposes is Handle. Handle can lift loads up to 45 kilograms and has two legs with wheels. The wheels can be used on flat surfaces, and the legs can be used to move up and down stairs or to jump over obstacles. Handle's mobility and flexibility make it an excellent choice for warehouse and factory environments, where heavy loads need to be moved quickly and efficiently. Handle's design is also modular, allowing companies to customize the robot to fit their specific needs.

As Boston Dynamics continues to develop new robots and technologies, the possibilities for their applications are virtually limitless. The acquisition of Boston Dynamics by Hyundai Motor Group in 2021 opens up great opportunities for creating new products and technologies that will be useful in many areas of people's lives. For example, using robotics and mobility technologies developed by Boston Dynamics, Hyundai plans to develop a new platform for autonomous electric cars that can be used to move around in bad weather conditions, help people with disabilities, and provide emergency medical care.

The combination of robotics and mobility technologies has the potential to revolutionize transportation and mobility, making it safer, more efficient, and more accessible for everyone.