

Historical Evolution of Industrial Robotization: From the First Industrial Revolution to Industry 5.0*

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Abstract

The article explores the major developments of the four industrial revolutions and how they affected employment structure, working conditions, and society. Steam engines, which were introduced during the first industrial revolution, transformed transportation and production. The second industrial revolution came with electricity, assembly lines, and the development of the chemical and oil industries. The third industrial revolution, known as the information era, is characterized by the adoption of information and communication technologies. Industry's 4.0 foundations are based on advanced automation, artificial intelligence, and the Internet of Things (IoT). The article also emphasizes on the importance of Industry 5.0, which focuses on even more specific relationship and integration between humans and robots. The article provides a wide view of the impact of industrial robotization on present and future both society and the economy.

Keywords: industrial revolution, Industry 4.0, Industry 5.0, robotics, labor market