# Relevance of the national program of automatic, robotics and artificial intelligence projects in applications

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The use of Automation, Robotics, and Artificial Intelligence is one of the ways for the effective use of resources, since it guarantees a constant quality and contributes to the technological discipline, and in essence a driving force behind the development of the economy and the society in general. The Ministry of Science, Technology, and Environment of Cuba created a National Program of Projects to promote these scientific disciplines and the application and generalization of their results. The work highlights the importance of the interdisciplinary nature of the Program and demonstrates the need, for the successful execution of projects, of the application of correct methodologies as a guide to design and development work. It shows, through the converge of Control and Machine Learning Theory in the Iterative Learning control, how addressing these issues together helps to promote them. The operation of deep reinforcement algorithms is explained and how their application in robotics allows them to accelerate

their development and make their behavior more flexible in an autonomous way. Finally, through three projects that are developed in the program, the relevance of the interdisciplinary conception of the program is demonstrated to carry out the doctoral research topics corresponding to each of the projects.