

CASE STUDY

A universal environment for graphical programming of educational robots

COMPANY

RoboAPP

CHALLENGE

The challenge of the project was to create a universal graphical, intuitive programming environment, which is an important element in the dissemination of learning programming with the use of robots, significantly facilitating or even enabling an effective teaching process in school conditions.

SOLUTION

We have developed a universal graphical programming environment for educational robots, providing a user-friendly drag-and-drop interface and programming language that allows (without knowledge of complex syntax and semantics) to program robots built on various hardware platforms. By design, all program elements and robot objects are available in the form of a graphical representation. The simplicity of the language and environment allows for effective programming of robots without knowledge of the technical complexities associated with a given robotic platform and without the need to understand advanced concepts related to the specifics of real-time control. The environment enables programming educational robots from the most popular hardware platforms, including LEGO (WeDo and EV3) and mBot series robots.

BUSINESS EFFECT

The developed integration solution allowed, among others, to build increased involvement of users of this product. Technology that connects many different robotic platforms also allows for personalized learning paths that take into account individual students' strengths, weaknesses and learning styles. This allows students to progress at their own pace, ensuring more effective learning outcomes in robotics and programming.

Project in numbers

- 1 universal programming language
- 3 number of integrated robotic platforms
- 1,000+ number of sensors, pads and parts used in tests

About the client

RoboApp – modern solutions for education

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INNOKREA is a well-coordinated team of specialists. I admire their creativity, speed of action and innovation. This team brings much more to the project than just good code. They identify passionately with their clients and their challenges.

Adam Barzowski

President of the Management Board, RoboApp Sp. z o. o.