Cuboide - Screenless Robot Programmable by Children

Apablaza, Matias (School: Instituto Tecnologico del Comahue)
Munoz, Matias (School: Instituto Tecnologico del Comahue)

Society is used to consume technology and isn't interested in creating it, little kids don't receive enough stimulation for developing logic and creativity skills. Consequently, the interest in pursuing STEM careers and the capacity of solving problems worsens. Furthermore, methods for teaching coding (what involves thinking creatively and logically) all require computers/cellphones/tablets, turning them expensive and affecting kids sight. Thus, we created Cuboide, a robot designed for children 4-12 years-old that is programmed in a unique way. The children receive challenges and should solve them by placing in a grid cardboard figures that represent the actions that the robot will do, then they press a button and the program runs. Because it doesn't require screens, it's much healthier and didactic for kids. Also, because it's modular (most functions can be bought separately), Cuboide adapts to the economic capabilities of parents, and the cognitive capabilities of children. We tried the robot multiple times, and we got very positive answers from children and parents. Currently, we're performing an experiment to determine if Cuboide accomplishes its mission of fostering creativity and logic skills. We gave a set of problems to a group of scholar kids for evaluating the desired skills, then we asked their teachers to incorporate a unit of Cuboide in the class for 3-4 weeks, and after this period we'll give the kids another set and evaluate how Cuboide affected their performance. Finally, we'll look to implement Cuboide in the therapy of autistic children, as suggested by a local autist organization.

Awards Won:
Fourth Award of $500