



The Robot A06, semi humanoid robot for education.

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Abstract:

The robots are those machines programmed that day by day fulfill a particular function and that take shape as a fundamental part of our lives, around the world different types of robots are developed, they are built from those that are manufactured for the Industrial areas to those For Educational purposes, El Salvador for its part is not the exception, since it has inventors and researchers who have developed robotics projects of different kinds and fields of study, among them we can mention Ademir Bermúdez, who throughout the years has dabbled and driven in robotics in the country with the development of different robots some of them created at the Gerardo Barrios University (UGB) and other personal. Within the UGB, the best known robots are Robotito, Robi a robot for the social interaction of children with special needs, Alan T Robot a service robot and which is in AI processes and a robotics kit from 4 grade to University, among others.

DEVELOPMENT:

The semi-humanoid Robot A06 arises from the ideal of the Christopher robot where each version of "A" has been printed in 3D, the latest version is in 3D printing, measures 65 cm, has two arms, waist, face and base With wheels for the construction of the robot, the next development cycle is carried out, the objective of the robot is clear. The project aims to be a learning robot for children and young people, thereby promoting the ease of human-robot interaction through: Minibloq, Ardublockly, Arduino, Visual Studio, Snap4Arduino, also for body movements among other languages. The robot has sensors to interact with the environment, said electronic components known as; motion sensors, distance, colors, sound detection that interconnected with each other allow the robot to perform some activities that are executed, in turn it has two screens that allow the simulation of emotional states similar to those of the human being in order that it has a certain degree of empathy with its surroundings, so it also has a screen where it shows data captured by its sensors or other relevant information and that serves as a parameter to the human being, in the same way it has a horn for the emission of sounds with an internal memory of 16GB. Each of its versions seeks to reach the maximum of the ideals in order to meet its development objective, it should be emphasized that the final idea is to have a functional robot, printed in 3D, easy to control and that can be programmed on different platforms. The name is from the

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story of the predecessor of Astro Boy, which was called A106 or ATOM which is the goal of reaching an advanced robot in the future.

METHODS:

The research methodology is applied since the development of the robot is based on previous and experimental knowledge since it collects data from people who have interacted with it and its previous versions, thus working with a mixed method with a qualitative approach.

RESULTS:

The project is still under development, some tests have been carried out with versions A01, A02, until A06, the following versions by components are on hold

DISCUSSION AND CONCLUSION

The fundamental idea was based on the robot calling Christopher and the manga ATOM INICIA, with which it is expected to have a 150 cm robot at the end of the investigation, which is programmable, friendly design and easy to use, for schools, colleges, institutes, and universities. You have a great way to go, up to an A106

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