

TECH 4398

Appendix I: Senior Design Project Abstract

Product Description: A 5-joint Arm Robot for Research/Educational Purposes (BCN3D Moveo)

Design and fabrication of an affordable 5-joint programmable arm robot, using 3D printed joints, that will be used for research and educational purposes

Abstract:

One of the most common robots, which is widely used in manufacturing systems is robotic arm. The industrial robotic arms, usually made of 4 to 6 joints, are used for different applications such as welding, painting, assembly, pick and place, product inspection and testing. An affordable 5-joint arm robot platform, for research and educational purposes, was design by the BCN3D technologies. Two senior design teams were assigned to evaluate the original design (BCn3D's Moveo), if necessary, modify the original design based on the available parts in the US market and to further improve it, and fabricate two prototypes of the arm robot. Combination of 3D printed parts (for the joints) and off-the-shelf parts (motors, bearing, etc.) will be used to fabricate the prototype.

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