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3D Scanner using Arduino Board

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Abstract: *A 3D scanner refers to creating a generalized and simplified representation of the functionality, data output and operation of 3D scanner. It is often used in engineering, computer programs and various applications. The proposal of this project is to construct a scanner for scanning of smaller objects and visualizing them in a computer.3D scanner is commercially available using techniques like image processing, laser, etc. These techniques are high-resolution webcams and high-end equipment like laser source. They have good accuracy, but it is equally expensive. We will talk about a way to create a cheap standalone 3D scanning system, which through the use of processing information taken by a camera and line laser, can create digitized 3D models. This model can be used in digital animation or printed with 3D printers for a wide verity of applications.*

The scanner was designed using Solid Edge and utilizes two stepper motors to scan objects. One motor is used to rotate a platform that the object is placed upon and the second stepper motor is used to move an elevator on which a distance sensor is mounted.

Keywords: 3D Scanner, 3D Printer

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