# Pick And Place PCB Assembling Using Rectilinear Arm

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## ABSTRACT

Printed circuit boards (PCBs) are a massive part of just about every piece of electronic equipment that we have in our day to day life. The computer you use, the phone in our pocket, our television, and so much more rely on these boards.

PCB assembling can be done in the following three ways like Thru-Hole Technology (THT) Assembly Process, Surface Mount Technology (SMT) Assembly Process, and Mixed Technology. THT is used in smaller companies and start-ups where the PCB assembling involves human power which is more time-consuming when Compared with SMT, which involves machines.

Our project has a feeder, compounds mounting by a rectilinear arm which is used in a 3D printer, and an automatic soldiering part. A component like resistors will be loaded to the feeder the two ends of the resistors will be bent with the help of stepper motors aside. A rectilinear arm is used to pick and place the components by using the pinsetter method. PCB board flipped upside down for soldiering part by the same arm. The extra part of the components will be cut by using a metal cuter. Error detection is done through the computer vision by Open-CV module.

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