



IIT Kharagpur



PCB components and defects inspection using Computer Vision and Deep Learning

- Solution to solve the problems in PCB manufacturing confined with the inefficient manual/conventional inspection methods and deploy an Automated Optical inspection using Deep Learning and Computer Vision
- PCB type classification staggering with 100% test accuracy
- The number of components in the PCB is inspected with standard detection method
- The model detects the capacitors, ICs, resistors, computer adapters and flex cables in real-time
- PCB defect classification with 100% testing accuracy
- Feature matching technique for PCB classification and inspected for defects
- Real-time inspection of PCB components with a detection time of 20 sec
- Object detection for PCB components to identify the location and detect the type of components in the PCB

