3. **Industrial Camera Inspection System (Machine Vision):**
   This System was developed using deep learning for detecting pharmaceutical tablet defects before primary packaging. As for the hardware a basler GigE (aca1300 - gc) camera has been used with a 12mm lens. LED panel light has been used to illuminate the Area of Interest (AOI). An I/O board has been used to establish communication between the packaging machine and the camera inspection system. The hardware portion itself is equipped with a 12V 5A power supply. The camera was connected to a separate computer via Ethernet cable for image data processing. The computer received hardware trigger from the packaging machine via the I/O board. Upon receiving a trigger the computer shot an image of the AOI and processed the image using a Convolutional Neural Network (CNN). The neural network would give the decision of whether a tablet should be accepted or rejected based on the quality of the tablet manufactured. The decision was transferred back to the packaging machine via the I/O board. The packaging machine would then reject the defective tablet strip.

Fig: Industrial Camera Inspection System