

Abstract

Method and systems for defect detection in images by processing the target image using a reinforcement learning agent (RL agent) provided in a memory accessible to the processor to identify a coarse defect region in the target image, processing each coarse defect region using an object detection model (OD model) provided in the memory to identify a sub-region of the coarse defect region corresponding to a defect; wherein the OD model is trained using a low-resolution image dataset; and the RL agent is trained using a high-resolution image dataset [and a dynamic threshold setting mechanism for the RL agent's reward function](#).

Figure 2(a)