AI in Product Surface Scratch/Defect Detection

Yo-Ping Huang

Abstract:

Automatic optical inspection (AOI) is a rapid, high-precision technology employed to examine product surface scratch/defect. It enables manufacturers to accurately diagnose defects. Although AOI yields favorable outcomes, automatic defect detection remains a substantial challenge in the manufacturing industry. Hence, scratch/defect detection is a highly critical task in manufacturing operations to increase the yield and maintain product quality.

Applications of AI algorithms and modeling can be found everywhere, especially in industry. An increasing trend of adopting image processing and pattern recognition-based defect detection approaches has been reported widely. This talk will approach from system engineering perspective and focus on introducing effective AI and image processing methods that are used to locate defects, segment, cluster, and then isolate them.