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[54] IMPROVING RAIL TRACKS DEFECT CLASSIFICATION BASED ON A CASCADE SWIN-TRANSFORMER MODEL

基於級聯 SWIN-TRANSFORMER 模型改進鐵軌缺陷分類

[57] The present invention relates to a computer-implementable system and method for detecting defects in railway tracks images using Artificial Intelligence (AI). The system comprises a receiving module configured to receive image inputs, a pre-processing module configured to pre-process the image inputs, a two-stage Transformer model configured to detect defects and false alarms based on the image inputs, and an output module to display results containing images with defects, false alarms or unknown.

本發明涉及一種用於使用人工智慧 (AI) 來檢測鐵路軌道影像中的缺陷的計算機可實現的系統及方法，該系統包括：接收模組，被配置為接收影像輸入；預處理模組，被配置為對輸入的影像進行預處理；兩級 Transformer 模型，被配置為基於影像輸入偵測缺陷及誤報；以及輸出模組，用於輸出顯示包含缺陷、誤報或未知的影像結果。

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