跨平台影像分析技術應用於鏟花品質檢測

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摘要

本論文透過網頁技術與電腦視覺技術發展出鏟花品質檢測系統，鏟花品質檢測主要是由專業的鏟花技術人員去判斷，而隨著每個技術人員的經驗、技術、眼力與穩定度的各個不同方面的影響，每個個所判斷的標準也有著相當的落差，近年來越來越多透過影像視覺的方式來判斷鏟花的品質，但是都有著平台上的限制，目前在市面上主要有 Apple iOS、 Google Android、Windows 與 Linux 為主流的作業系統，而現有的鏟花影像檢測系統，大多都須使用攝影設備與 Windows 電腦做連結或只限制在 Android OS 的手機，並無考慮到平台的限制性，本篇提出由網頁技術搭建系統，並使用 OpenCV.js 在瀏覽器上擷取裝置所上傳的圖片，將 RGB 圖像分離後取出目視圖象最為良好圖像，然後進行二值化、中值濾波與形態學的圖像處理方法，達到無平台限制與鏟花品質檢測的目的。

關鍵詞：鏟花品質、跨平台、影像辨識、網頁技術

Cross-Platform Image Analysis Technique for Scraping Quality Identification

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Abstract

This paper develops a cross-platform scraping quality inspection system via web technology and computer vision. Each scraping expert has different criteria for scraping quality inspection. This results in different qualities for different experts on the same quality inspection due to different experts' experience. In recent years, the quality inspection of scraping is conducted by computer vision systems, but there are restrictions of these systems due to not providing cross-platform versions. This leads to high cost on developing the kind of systems due to each program version for each platform. Currently, there are popular platforms such as Apple iOS, Google Android, Windows and Linux. Moreover, development of existing scraping image detection systems is high-cost due to a need of photography equipment to connect to computers and a single platform version, Android version. Therefore, this thesis employs web technology and OpenCV.js to develop a cross-platform scraping quality inspection system to

support scraping quality inspection over various platforms. This approach reduces the cost of developing scraping quality inspection systems. It can solve the problem of different quality inspections on the same scraping via distinguished experts.