

CHANGSIK WOO

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RESEARCH INTERESTS

As an inspection process engineer at LG Display, I aim to build full inspection automation via AI. I am deeply interested in various research fields essential for making inspection process automated by using diverse types of images.

- Computer Vision & Image Processing
- Computational Photography
- Video / Multimodal Understanding

WORK EXPERIENCE

LG Display, Paju, South Korea

Jul 2016 - Present

Senior Engineer - WOLED(TV) Manufacture Inspection Process (Currently focused on Automation)

Honors & Award : Selected as Core Employee (2023-present) & Degree Dispatcher (2024)

PROJECTS

Projects Related to Inspection Process Automation at LG Display,

- **Mura Defect Detection Automation via Anomaly Detection (PaDiM) (Jul. 2023 – Jun. 2024)**
 1. [Feasibility Test] By using screen images, test involved Image Download, Image Processing, Training & Modeling, and Performance Verification.
 2. [Optimizing Image Processing] When taking images in the previous process, images may be rotated or curved due to many reasons. To improve this problem, a python module for image processing was developed. That module find edges through contour approximation, and rotation and curve are improved through perceptive transform. In conclusion, PaDiM accuracy is improved (OK : 11% → 69%, NG : 29% → 93%).
- **Defect Classification Automation through Trained Classification Model (Jul. 2022 – Dec. 2022)**

By using thumbnail images, classification model was trained and applied at inspection process to Classify different types of defect labels including over-detect. This model can be classified with 95% accuracy and over-detect can be improved by more than 70%

EDUCATION

Sungkyunkwan University, Suwon, South Korea

Mar 2010 – Aug 2016

B.S. in Electronic and Electric Engineering

GPA : 3.85 / 4.5

SKILLS

Languages : Python (Intermediate)