**Keyboard layout automation check**

**Author:** PQA intern Benson Lin

**Project Describe:** Improve traditional detection method with YOLO V8 model, then generate the excel report, this report records the detailed results of the automation check.

**Python file name (with YOLO and report generate)**: LayoutChecker\_v20240613\_YOLO.py

**Python file name (NO YOLO)**: LayoutChecker\_v20240613\_no\_YOLO.py

**Python Version**: 3.8.18

**How to** **execute project:**

* **Step1**: pip install - r requirements.txt
* **Step2:** Drag the compare file into folder(Design, PDK or Reference), for example: Drag “Chengdu Universal US INT'L V3.3.pdf” and “Chengdu Universal US INT'L V4.0.pdf” into design folder.
* **Step3:** python LayoutChecker\_v20240613\_YOLO.py
* **Step4:** After the inference, you can get the results like bellow Fig 1 and Fig 2:

|  |
| --- |
|  |
| **Fig 1. The folder after inference.** |

|  |
| --- |
|  |
| **Fig 2. The report file.** |
|  |
|  |

**P.S. : Currently, only “chendu” has a better recognition effect. If you want to apply it to other types of keyboards, you need to increase the training data set or add a data pre-processing method.**