HighLevelDesign(HLD)

Image to Text Converter

Revision Number: 1.0

Last date of revision: 01/10/2021

# Document Version Control

|  |  |  |  |
| --- | --- | --- | --- |
| **Date Issued** | **Version** | **Description** | **Author** |
| 25/09/2021 | 1 | HLD | Anirban Sen |

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# Introduction

## Why this High-Level Design Document ?

The purpose of this High-Level Design (HLD) Document is to add the necessary detail to the current project description to represent a suitable model for coding. This document is also intended to help detect contradictions prior to coding, and can be used as a reference manual for how the modules interact at a high level.

The HLD will:

* + - Present all of the design aspects and define them in detail
    - Describe the system requirements
    - Include design features and the architecture of the project
    - List and describe the non-functional attributes like:
      * Reusability
      * Application compatibility
      * Serviceability

## Scope

The HLD documentation presents the structure of the system, such as the database architecture, application architecture (layers), application flow (Navigation), and technology architecture. The HLD uses non-technical to mildly-technical terms which should be understandable to the administrators of the system.

## Definitions

|  |  |
| --- | --- |
| *Term* | *Description* |
| *Image to Text Converter* | Image to Text Converter |

# General Description

## What is Image to Text Converter

Photo to Text Converter, as the name give you a hint, is a tool or program, using the help of OCR technique we make it possible to extract text from the images.

A free Optical Character Recognition software translates the characters in a picture into electronically designated characters. This can translate any sort of text on photo and you can use it as an image to word converter to conveniently extract text on any image, straight from the photo itself rather than going through all the trouble of typing.

This image to text is a handy service which enables you to upload any image file, analyse the text in it and then convert the typed, printed or handwritten text in the image into the text file that you can easily share, download or edit on your computer.

## How optical character recognition (OCR) works

OCR is a radical technology when it comes to Image to Text converter that allows you to scrutinize a photo and recognize the text on the photo which may be written, typed or printed. This text can later be translated and used in your word processor, publishing software, or other text related purposes. OCR is a complex yet most efficient way of the electronic or mechanical conversion of an image into machine-encoded text. OCR converter is generally used in scanned documents, especially apposite for situations wherein you are required to copy from an image, but typing is not what you want.

An error-free technology really does is optically recognize and translates each character within a picture or scanned a document into an electronically assigned character. The character recognition process is a complex one, requiring an OCR program matching an image to an electronic version that corresponds to it. The tool has to identify the font which is used in the image for recreating the document.

Sometimes the scanned copies of a document are blurred and low-quality with unrecognizable characters, especially if the original paper copy was of low-quality. In such situations, it is quite difficult for any free OCR software to give you accurate results which may lead to errors.

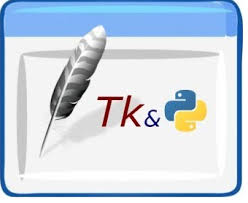
No doubt that OCR is a breakthrough in technology but until now they haven’t yet introduced a complete error-free software. Nonetheless, advancements are continuously being made in this direction. Today, there are many jpg to word converter tools out there that can easily convert your scanned documents or jpg photos into words surprisingly well. One of them is the free image to word converter of that includes an advanced functionality and gives its users a platform to quickly translate or extract text from an image.

## How to use Image to Text Converter

Nowadays, there are quite a few free Optical Character Recognition software or image to word converter. It is certain that you can find one easily. I came up with useful resource that is Image to Text Converter, which will help anyone to extract text from the image. It’s found to be very useful and very easy to use. First, we need to install the Image to Text converter in a desktop, then we need to run the application. Once, the application gets open, we need to select an image using select button, then image will pop up, after that we need to click on extract button to extract text from image. At the end, if want to save the text displaying screen at application. We can save in any format.

## Tools used

Python programming language and frameworks such as Tkinter, OpenCV, Pytesseract are used to build the whole model.



* + - PyCharm is used as IDE.
    - Tkinter is used to create the design of the application.
    - OpenCV used to read the image and display image.
    - Pytesseract is used to extract text from image.

##### 2.4.1 Hardware Requirements

##### Processor: Intel(R) Core(TM) i5-2400 CPU @ 3.10GHz 3.40 GHz

##### System type: 64-bit operating system, x64-based processor

##### RAM: Minimum 4GB

## Design Details

## Process Flow

For identifying the different types of anomalies, we will use a deep learning base model. Below is the process flow diagram is as shown below.

Text extracted by tesseract

Image read by OpenCV

Image selected from desktop

Text displayed on screen

## Reusability

## The code written and the components used should have the ability to be reused with no problems.

## Application Compatibility

The different components for this project will be using Python as an interface between them. Each component will have its own task to perform, and it is the job of the Python to ensure proper transfer of information.

# Conclusion

With the help of an OCR converter desktop application, our organization or we individually can convert static pictures to digital text, and so perform an electronic search or any other task for any information which is needed, with instant results.