- Pre-processing

- Text detection

- Text recognition

- Post-processing

The sub-processes can of course vary depending on the use-case but these are generaly the steps needed to perform optical character recognition.

Tesseract OCR :

Tesseract is an open source text recognition (OCR) Engine, available under the Apache 2.0 license. It can be used directly, or (for programmers) using an API to extract printed text from images. It supports a wide variety of languages. Tesseract doesn't have a built-in GUI, but there are several available from the 3rdParty page. Tesseract is compatible with many programming languages and frameworks through wrappers that can be found here. It can be used with the existing layout analysis to recognize text within a large document, or it can be used in conjunction with an external text detector to recognize text from an image of a single text line.

OCR Process Flow

API   Input Image   Text   API