

# OPTICAL CHARACTER RECOGNITION

## OCR to Leverage Business Productivity

Naulinnovation Informatika Otomasi



### At a Glance

- Manual data entry harms efficiency and effectiveness of business operations.
- OCR implementation increases business productivity.
- OCR is easy to integrate with any kind of IT system either by API or library strategy.

### HISTORY OF OCR

Optical character recognition (OCR) is the process of translating scanned images of typewritten text into machine-editable information. In the early 1950s, David Shepard founded Intelligent Machines Research Corporation (IMR), which produced the first OCR systems for commercial operation. Reader's Digest installed the first commercial system in 1955. The United States Postal Service has been using OCR machines to sort mail since 1965.

Today, OCR technology incorporates high-speed scanners and complex computer algorithms to increase speed and data accuracy.

### APPLICATIONS IN FINANCIAL SERVICES INDUSTRY

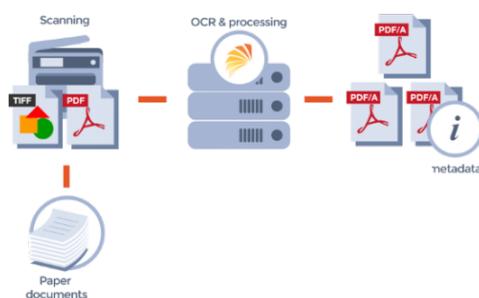
#### Front Office – OCR Instead of Manual Typing

OCR eases the daunting task faced by bank front desk officer in collecting all the customer details such as name, NIK, address, birth date, religion, etc. Instead of typing them into provided form, a camera can read those information and filled into form fields appropriately. It reduces customer acquisition time at least 2 minutes.

When two minutes reduced in customer acquisition time, the customer queue will be shortened and both customer and front officer experiences a better engagement.



Buat Akun	
Nama Depan	<input type="text" value="Leonar"/>
Nama Belakang	<input type="text" value="Tambunan"/>
Negara	<input type="text" value="Indonesia"/>
Alamat	<input type="text" value="Jl. LUMBU TIMUR II NO 358"/>
Kata Sandi	<input type="password"/>



#### Back Office - Document Digitization

When paper documents are scanned and translated into electronic data, companies benefit from faster and more reliable access to vital information. They have an efficient format for storing and distributing documents. Companies can keep the information in a central place and gain control over how the documents are accessed and altered by personnel.

### FinTech

The other application of OCR is in fintech mobile application where in the process of registration requires captured ID card, the user doesn't have to type their detail; instead, they are only required to validate the OCR reading field by field.

## APPLICATIONS IN OTHER INDUSTRY

### Transportation

Electronic Road Pricing (ERP) usually use OCR-based application to read license plate number of the car being passed through a checkpoint.

### Utilities

To read utility metering board, OCR based mobile application is very suitable to read the number instead of write it down on paper. Beside it reduces human error, it will minimize customer complains and make business sustainable.

## INTEGRATION

Currently available OCR API can be integrated with existing systems if it has capability to:

- perform WebServices request
- perform RESTfull request.

Building OCR-based system from scratch gives another option i.e. OCR library that could be deployed as modular library as an additional to above-mentioned integration technique.

### Why Use OCR by PT. NIO

- High success rate reading.
- Wide integration point options.
- NIO has resourceful team with extensive experience in Java, C++, and .NET that will increase time to market of system.

## OUR PROPOSITION

Common issues in OCR is low lighting and obscured image. Our OCR library and API equipped with color threshold level processing that will provide higher success rate of reading than our competitor.

## ABOUT PT. NAULINOVATION INFORMATIKA OTOMASI

PT.NIO consists of people who believe that end user business is more important than signed contract. Some of them have experience that a rigid partnership between IT system provider and end user harms both parties. For that reason, our organization applies agile project delivery.

OCR-based automation system is one of our organization most passionate field beside enterprise software development, mobile apps development, and load testing.