

# Project Report: Document AI Hub

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**DOCUMENT**  
IA HUB

# 1 Project Definition

Document AI Hub is an intelligent platform that automates the reading, analysis, summarization, and search within documents using Artificial Intelligence and OCR (Optical Character Recognition). The system is capable of processing documents in PDF format.

## 2 Objectives

The main objectives of the project are:

- Allow users to upload documents.
- Automatically extract key information such as names, dates, and amounts.
- Provide automatic document summarization.
- Allow users to interact with the document through an AI assistant.
- Export the extracted data.

## 3 Key Features (How It Works)

The system relies on several main features for document processing:

### 3.1 Document Upload

Users can upload documents in PDF, Word, JPG/PNG formats, which are then processed by an OCR agent. In the application, the `process_uploaded_file` function handles the upload, storage, and initial processing of the file.

### 3.2 AI Processing

An AI agent performs several tasks on the extracted text:

- **Automatic Summarization:** The agent generates a summary of the text in 100 words or less using a language model (Gemini).
- **Key Information Extraction:** It extracts entities such as persons (PER), organizations (ORG), and dates (DATE in dd/mm/yyyy format), as well as the document type and a simple summary, all in JSON format.
- **Classification:** A zero-shot classifier is used to categorize the document among predefined categories like "Invoice", "Contract", "CV", etc.

### 3.3 AI Assistant

The user can ask questions about the content of the document, and the AI assistant provides contextual answers.