

# DocOps - AI-First Document Intelligence Platform

## Vision

DocOps is an **AI-native, workflow-driven document intelligence platform** designed to process, understand, and reason over large documents (PDFs, scans, images) at scale.

This is **not** a CRUD app with AI bolted on later. This is a **DocOps system** — where documents are treated as *living workflows*, not static files.

The long-term goal is to evolve this into a **self-serve, privacy-first, cloud-agnostic document brain** for individuals and enterprises.

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## Core Philosophy

### 1. AI-First (Not AI-Added)

- AI is part of the **core execution path**, not a feature toggle
- Every document goes through an **intelligent workflow**
- LLMs are treated as **stateless reasoning engines**, not databases

### 2. Workflow Over Files

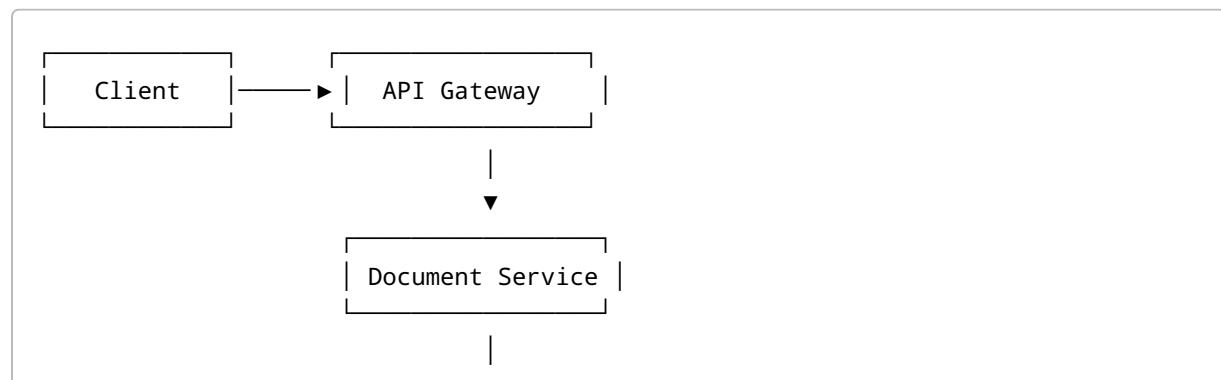
A document is not just uploaded. It **flows** through stages:

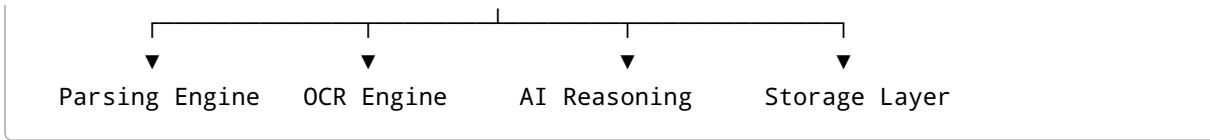
```
Upload → Parse → Normalize → Analyze → Summarize → Interact (Q&A)
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Each stage is: - Observable - Retryable - Replaceable

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## High-Level Architecture





## Key Design Choices

- **Service-oriented**, not monolithic
- Stateless services where possible
- Async-friendly from Day 1

## Tech Stack (Initial)

### Backend

- Java / Spring Boot (Document & Workflow services)
- Node.js (Thin AI gateway where required)

### Frontend

- Next.js (Browser-first, no forced login)

### AI Layer

- Gemini / OpenAI-class LLMs (pluggable)
- Prompt-as-code strategy

### Infrastructure

- Docker / Docker Compose (local & dev)
- PostgreSQL (metadata + workflow state)

## Phased Roadmap

### Phase 1 — Foundation ✓

- Repo structure
- Clean Git history
- Base service scaffolding

### Phase 2 — Document Service ⏪ BACK

- Upload & validation
- Metadata persistence
- Workflow state machine

## Phase 3 — AI Processing

- PDF parsing + OCR fallback
- Structured summarization
- Chunk-aware reasoning

## Phase 4 — Interactive Intelligence

- Contextual Q&A
- Multi-document reasoning
- Session-based memory (no long-term storage)

## Phase 5 — Scale & Monetization

- Usage-based limits
  - Org / workspace model
  - Enterprise connectors
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## Privacy & Trust Model

- **No document stored by default**
  - Processing happens per session
  - Explicit delete = hard delete
  - Designed to run fully client-side or self-hosted
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## What This Repo Is NOT

- ~~✗~~ Not a demo project
- ~~✗~~ Not a throwaway POC
- ~~✗~~ Not tied to a single AI vendor

This repo is intended to grow into a **real, maintainable, long-lived product.**

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## How to Contribute (Later)

- Code clarity > cleverness
  - Architecture decisions > shortcuts
  - Documentation is mandatory
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## Next Steps

- Add `docker-compose.yml`

- Start **Phase 2: Document Service**
  - Introduce workflow-based processing engine
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*DocOps is built for the next 10 years, not the next demo.*