

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.

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

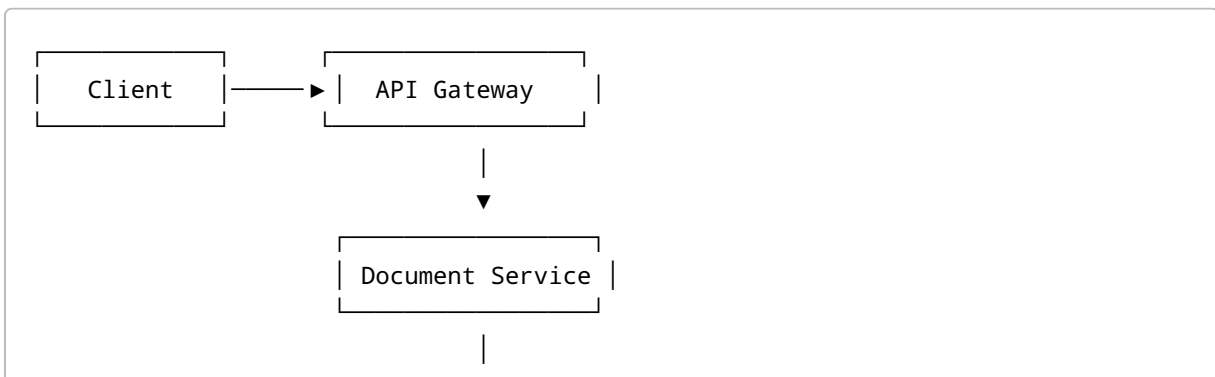
2. Workflow Over Files

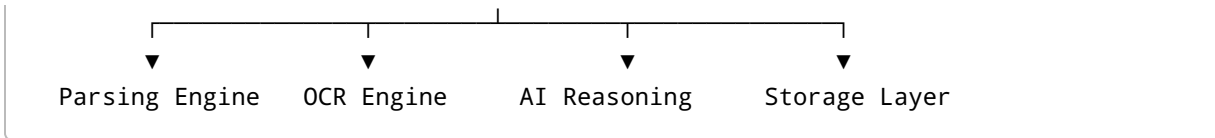
A document is not just uploaded. It **flows** through stages:

Upload → Parse → Normalize → Analyze → Summarize → Interact (Q&A)

Each stage is: - Observable - Retryable - Replaceable

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

- 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**.


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.*