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Document Management System for Financial Institutions

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DMS for Financial Institutions

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PARTNER COMPANY:
HCLTech

Background and Motivations

Financial institutions manage high volumes of sensitive, document-heavy workflows. However, many organizations still rely on manual and fragmented processes from disconnected tools which cause significant efficiency loss. More importantly, uploading files without early point-of-entry validation will highly likely expose financial systems to critical risks of data breach, ransomware, and cyberattacks targeting sensitive customer data. Hence, a centralized and secured document management system is very much needed to streamline operational workflows and strict data protection before the files reach permanent storage.

Objective

The primary goal is to develop a secure and centralized Document Management System tailored for financial institutions. This system aims to mitigate security threats and unify document processing through strict pre-storage malware scanning.

App Features

Secure Upload Pipeline

- **Validate**: Uploads undergo security checks.
- **Scan**: ClamAV checks for threats.
- **Filter**: Infected files are blocked from normal access.
- **Store**: Files are securely stored in Supabase.
- **Audit**: Uploads and results are retained for auditing.

Smart Content Safeguarding

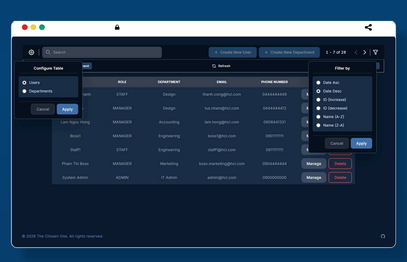
- **Extract**: Python FastAPI, Tesseract OCR, and spaCy pull text from unstructured files.
- **Redact**: PII is automatically identified and masked before storage.
- **Deliver**: Produces clean document views and loan readiness reports.

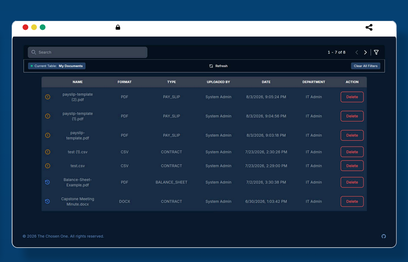
Institutional Access & Data Control

- **Staff**: Upload and manage their own documents.
- **Boss/Manager**: Access all department documents and get live notifications.
- **Admin**: Oversee users, role assignments, and department structures.

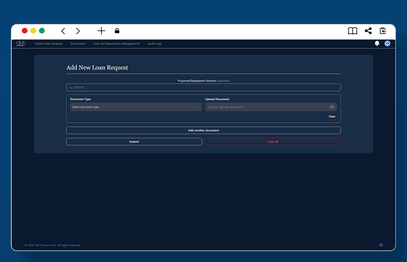
Demo & Results

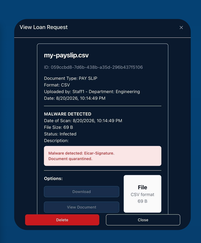
The implemented platform delivers functional RBAC-driven user interfaces, secure upload channels, and API integration verified via Swagger documentation. System workflows successfully isolate department data, enforce pre-storage security checks, and support administrative management operations seamlessly across all roles.



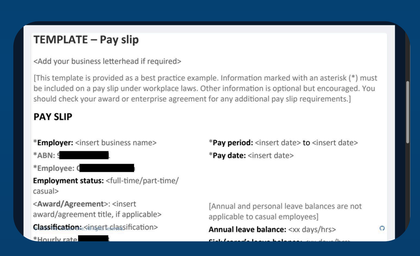


administrative dashboard to manage: documents, users, etc.





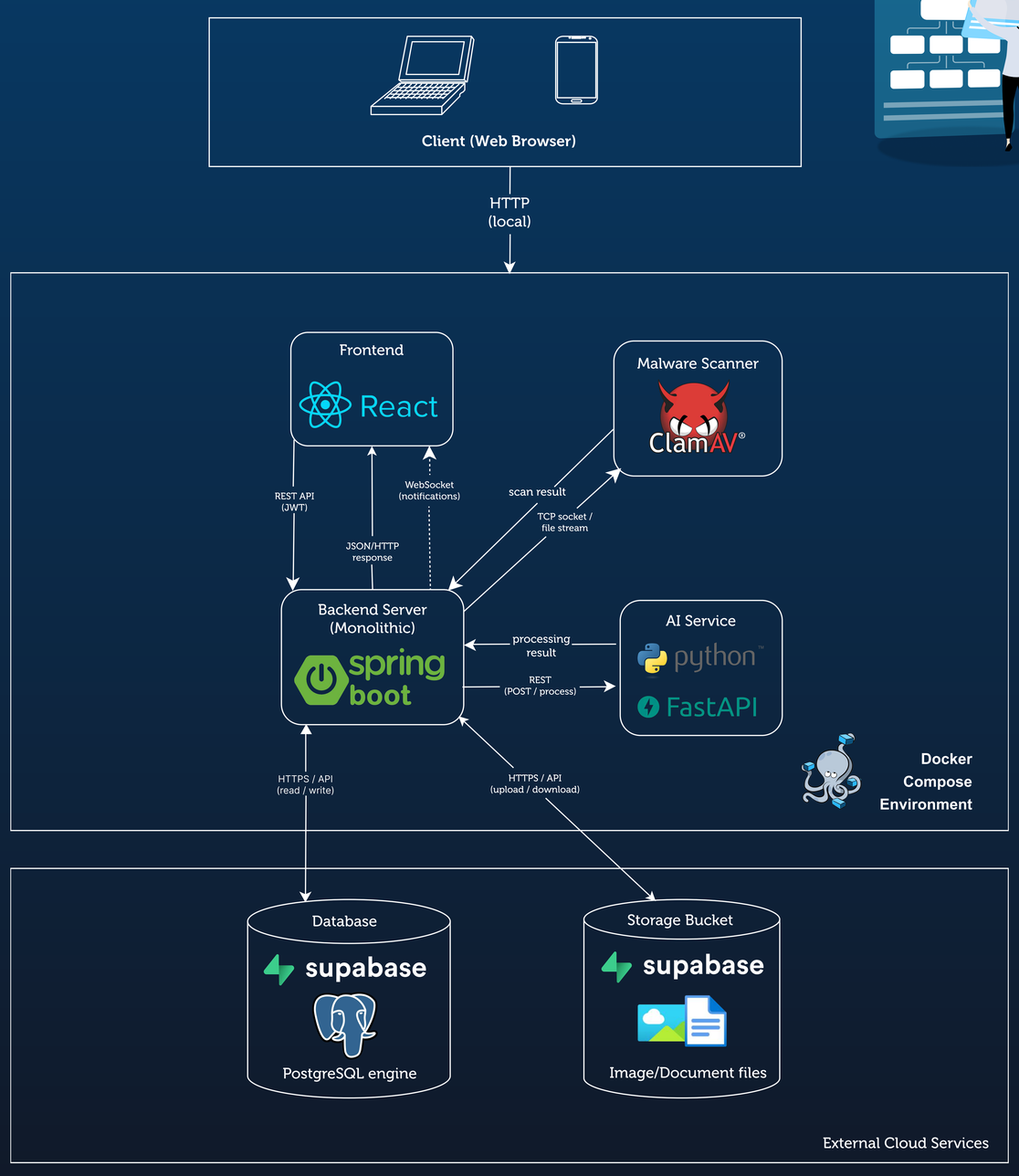
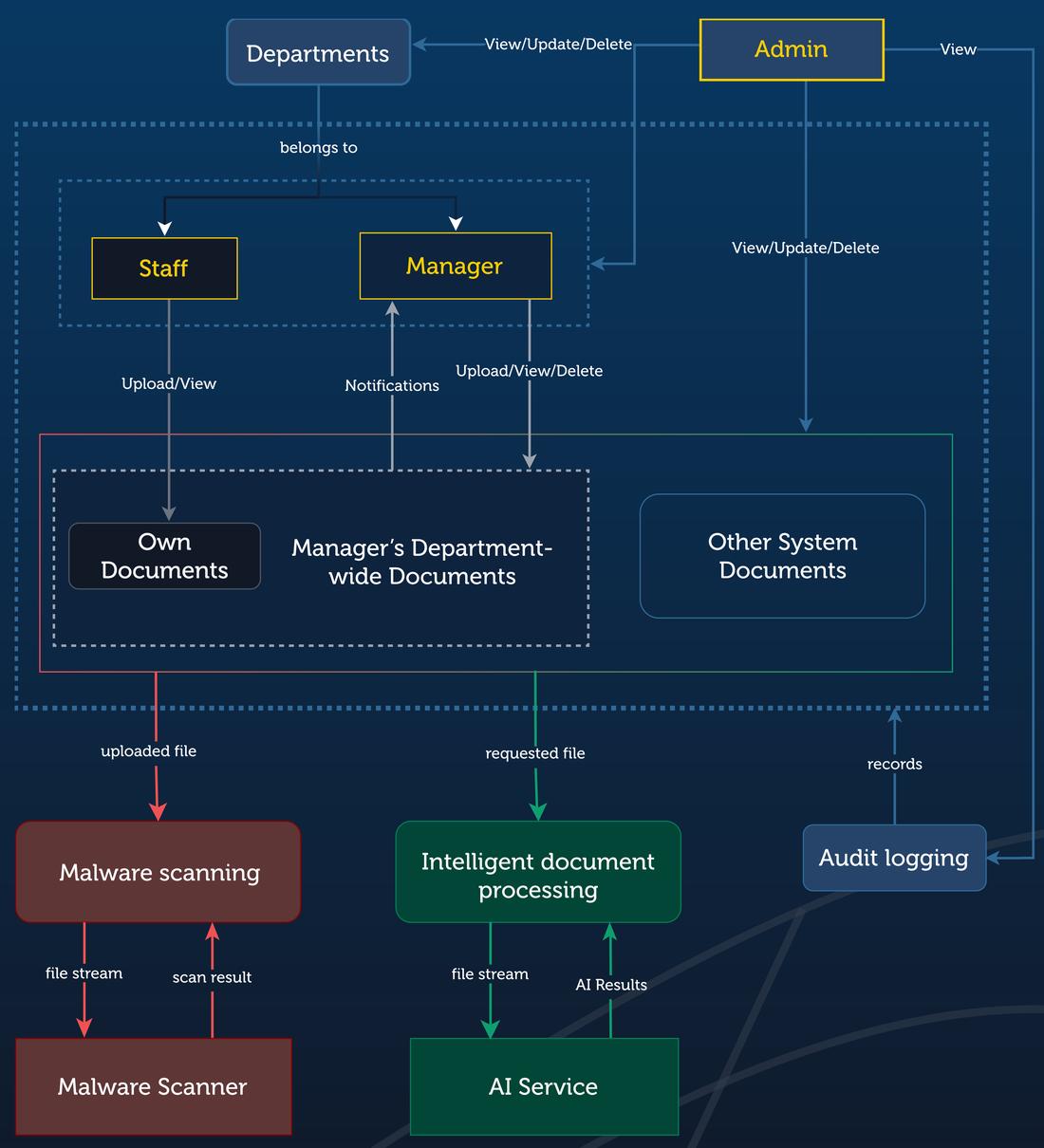
Detects and quarantines threats immediately at point-of-entry.



Redacts sensitive information

Methodology

System Architecture Diagram:



System Flow Diagram: