# Updated Component Breakdown: Interactive AI System for Legal/Tax Document Classification

## 1. Document Upload Panel

Platform: Web/Mobile (React, React Native, or Flutter)

Features: File upload, mobile scan support, metadata tagging

## 2. Cloud Storage

Tech: AWS S3 with Lambda/EventBridge

Purpose: Store raw documents and trigger processing pipeline

## 3. AI Classification Agent

Subcomponents: OCR (AWS Textract), embeddings (OpenAI/BERT), classification (LLM or fine-tuned model)

Function: Extract content, classify documents, group via clustering

## 4. AI Classification Review Panel (Unified UI)

Modes:

- Schema Definition Mode: Upload schema file or describe desired categories in natural language

- Category Review Mode: Review clustered categories, rename/merge/delete, generate labeling rules

- Document Feedback Mode: Validate individual samples, apply corrections, generate rules from NL commands

Platform: Next.js Web UI with Role-based access (Manager vs Analyst)

## 5. Label & Config Generator

Output:

- Final document labels

- JSON/YAML config files for UI generation

Example: { category: 'W-2 Form', highlight: true, groupBy: 'year' }

## 6. UI Code Generator

Generates: React + Tailwind components + optional backend integration (API endpoints)

Uses: GPT-4 Function Calling / LangChain Agent + Code Templates

## 7. Microservice Integration Output

Deployment: Generated UI and config exported as reusable components/config files

Supports: REST APIs, microservice endpoints, CI/CD configuration