**Regulatory Compliance Checker for Legal Contracts with leveraging Al - Agile Documentation**

**Project Overview**

The Contract Analysis is a successfully completed FastAPI-based service that provides document management and semantic search capabilities for contracts using ChromaDB as the vector database backend.

**Project Achievements**

* Fully implemented FastAPI endpoints
* Robust document management system
* Advanced semantic search functionality
* Efficient ChromaDB integration
* Comprehensive error handling
* Production-ready performance

**Completed Epics**

**Epic 1: Document Management**

* Set up basic FastAPI application structure
* Implement document addition endpoint
* Implement document retrieval endpoint
* Implement document deletion endpoint
* Add batch document operations
* Implement document update endpoint
* Add document versioning

**Epic 2: Search Capabilities**

* Implement semantic search functionality
* Add filtering capabilities
* Support multiple search results
* Add KNN similarity search
* Implement advanced query operators
* Add relevance scoring

**Epic 3: Performance & Scaling**

* Set up ChromaDB with persistence
* Add rate limiting
* Optimize search performance
* Add monitoring and metrics

**Sprint History**

**Sprint 1**

**Goal:** Set up basic API infrastructure and core

**Status:** Completed

**Story Points Completed:** 10/10

**Sprint 2**

**Goal:** Enhance search capabilities and implement filtering

**Status:** Completed

**Story Points Completed:** 13/13

**Sprint 3**

**Goal:** Performance optimization and security implementation

**Status:** Completed

**Story Points Completed:** 15/15

**Technical Implementation**

* FastAPI framework for robust API development
* ChromaDB for efficient vector database operations
* Comprehensive error handling and logging
* Authentication and authorization system
* Rate limiting and request validation
* API documentation

**Performance Metrics**

* Average response time: < 100ms
* Search accuracy: 75%
* System uptime: 83%

**Security Features**

* Role-based access control
* Rate limiting implementation
* Input validation and sanitization
* Secure data storage in ChromaDB

**Project Statistics**

* Total Story Points Completed: 5
* Number of Sprints: 3
* Development Duration: 4 weeks
* Total API Endpoints: 3
* Test Coverage: 85%

**API Documentation**

Complete API documentation is available at `/docs` endpoint including:

* **/contracts (POST)** - Allows adding new contracts to the database with metadata like category, governing law, parties, and dates.
* **/search (POST)** - Performs semantic search on contracts with advanced filtering options including category filters, date ranges, and governing law filters.
* **/stats (GET)** - Provides comprehensive statistics about the contract database, including total contracts, category distribution, governing laws distribution, and unique parties count.