📄 AI-Powered Documentation Crawler & Q/A System

A comprehensive FastAPI-based RAG (Retrieval-Augmented Generation) system for intelligently crawling documentation websites and providing Q&A capabilities with advanced vector search and multi-domain support.

📚 Table of Contents

🌟 Key Features

🕷 Intelligent Web Crawling

- Async recursive crawling with domain restriction
- Rate limiting and retry logic with exponential backoff
- Content extraction using trafilatura for clean text
- Comprehensive metadata preservation (titles, URLs, links)
- Respects robots.txt and implements polite crawling practices

💾 Advanced Storage Architecture

- **Dual format persistence**: JSON (machine-readable) + YAML (human-readable)
- **Domain-based isolation**: Separate storage per domain with organized folder structure
- **Individual document files**: Each page stored as separate file for granular access
- **Session tracking**: Complete crawl metadata and statistics

🧠 Sophisticated Embedding Pipeline

- **Multi-model support**: Gemini (primary) with sentence-transformers fallback
- **Intelligent chunking**: Configurable chunk size with overlap for optimal retrieval
- **Batch processing**: Efficient embedding generation for large document sets
- **FAISS vector stores**: High-performance similarity search per domain

🔍 Advanced RAG System

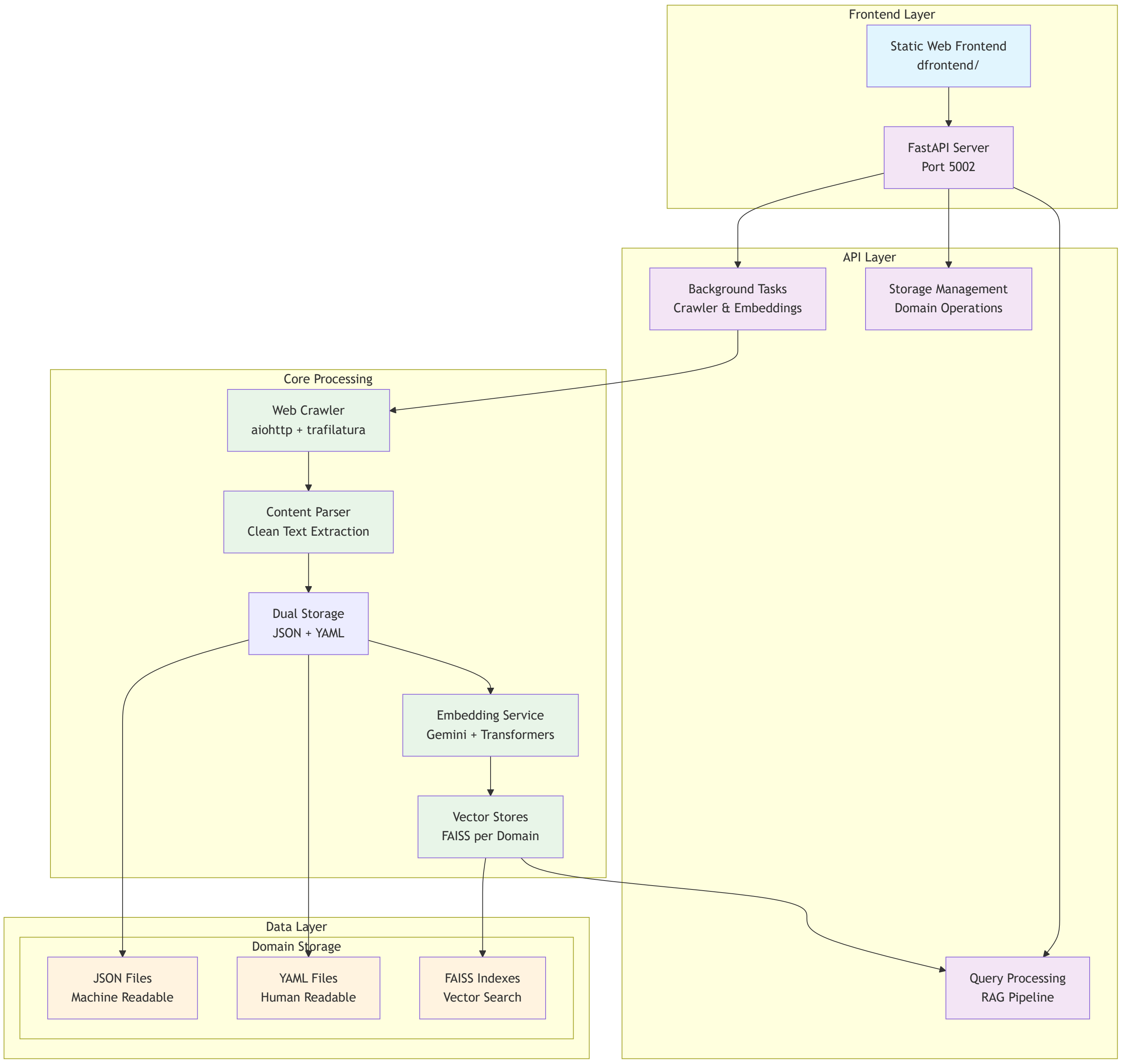
- **Multi-domain querying**: Search across multiple domains simultaneously
- **Context-aware generation**: Retrieval-augmented answers with source attribution
- **Configurable retrieval**: Adjustable top-k, context inclusion, and scoring
- **Background processing**: Async task management for long-running operations

🌐 Production-Ready API

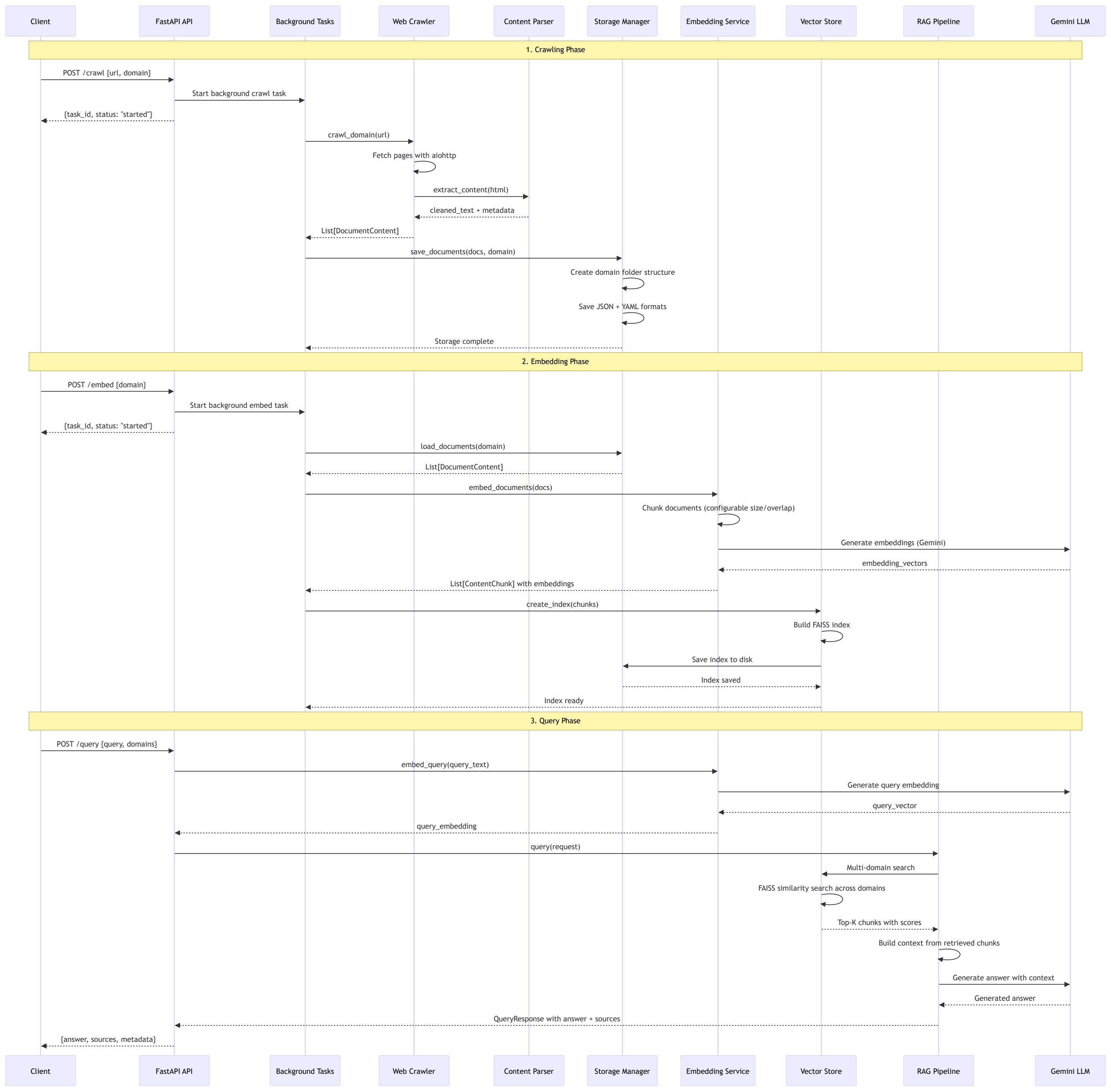
- **FastAPI framework**: Auto-generated OpenAPI docs and validation
- **Background task management**: Track crawling and embedding progress
- **CORS support**: Cross-origin requests for frontend integration
- **Comprehensive error handling**: Detailed error messages and status codes

🏗️ System Architecture

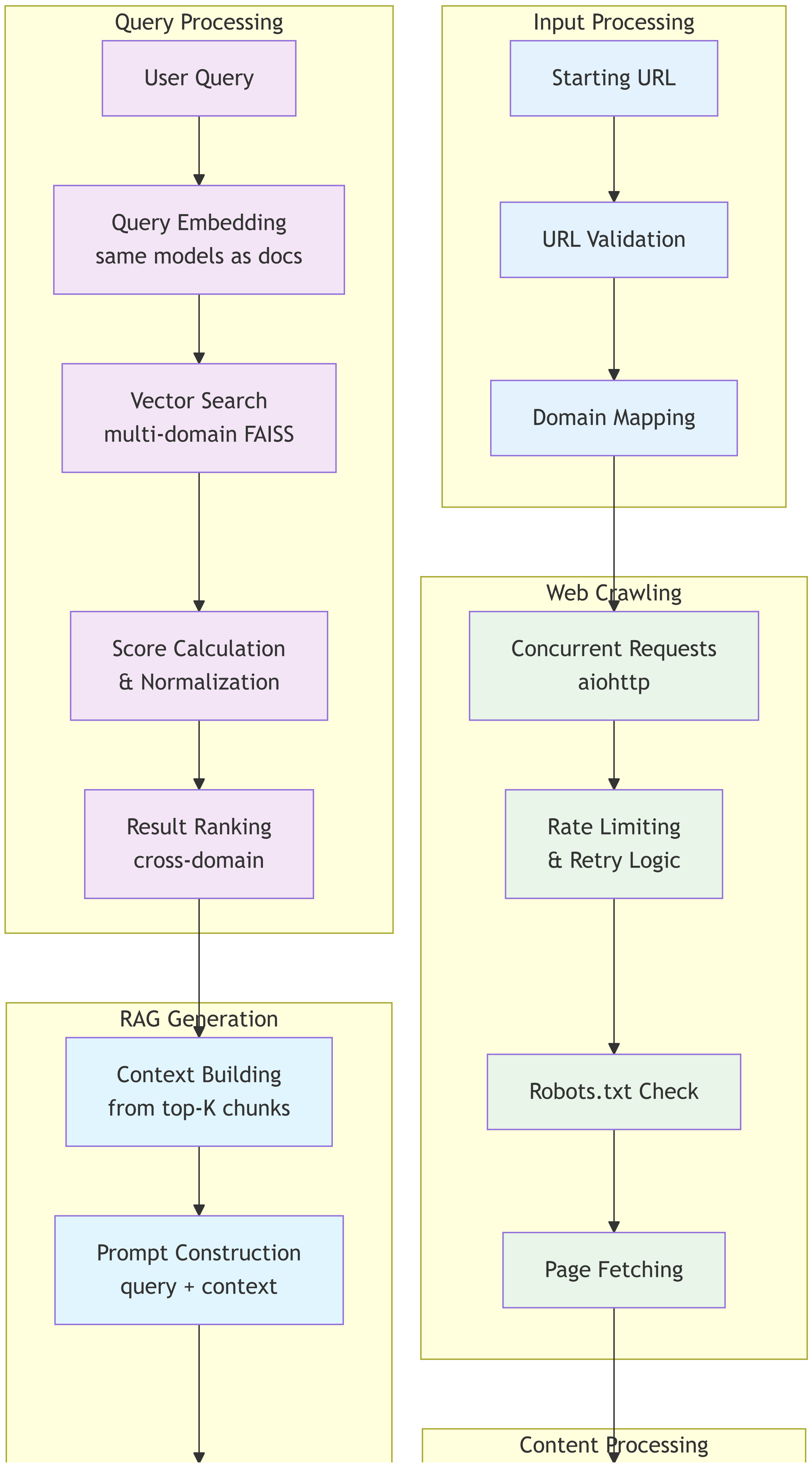
High-Level Architecture

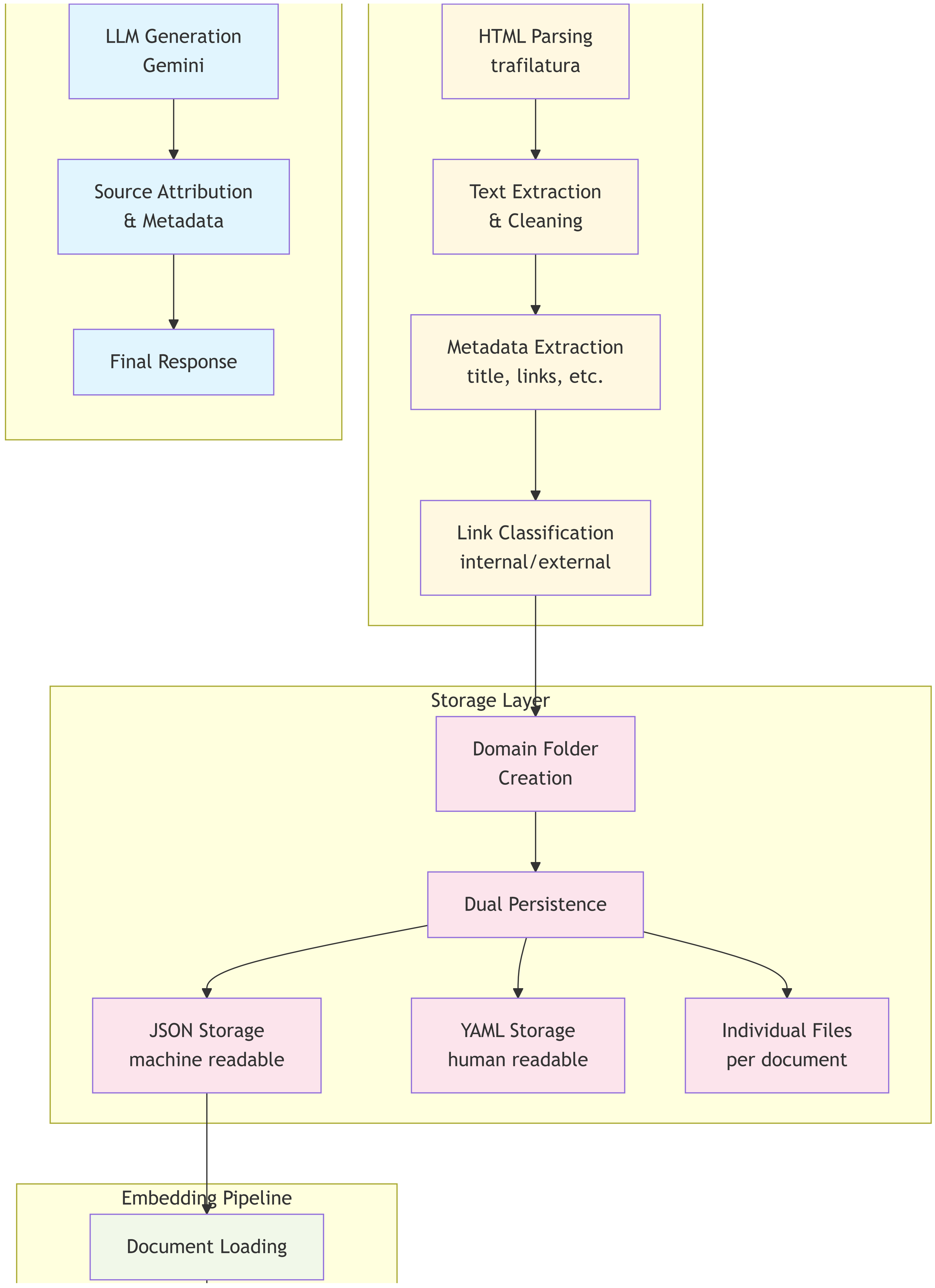

Frontend Layer
Static Web Frontend dfrontend/
FastAPI Server Port 5002
API Layer
Background Tasks Crawler & Embeddings
Storage Management Domain Operations
Query Processing RAG Pipeline
Core Processing
Web Crawler aiohttp + trafilatura
Content Parser Clean Text Extraction
Dual Storage JSON + YAML
Embedding Service Gemini + Transformers
Vector Stores FAISS per Domain
Data Layer
Domain Storage
JSON Files Machine Readable
YAML Files Human Readable
FAISS Indexes Vector Search

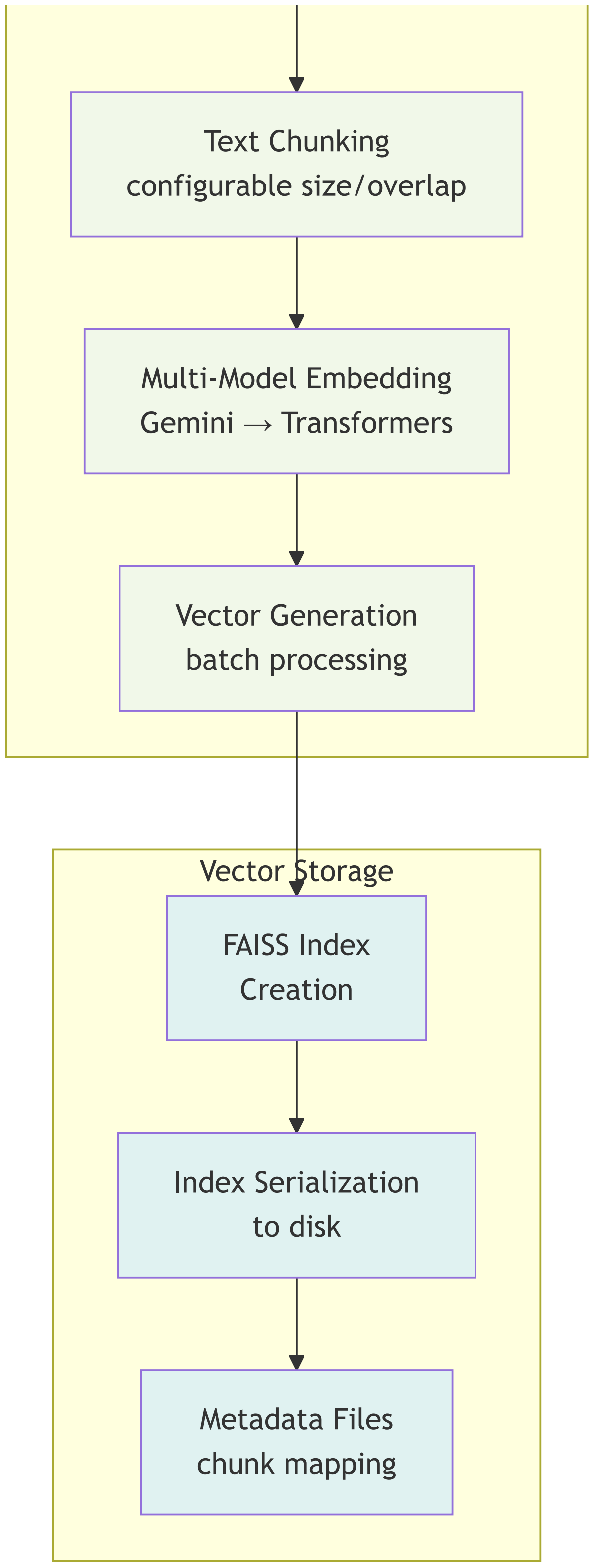
Detailed Code Flow



Data Flow Architecture


Query Processing
User Query
Query Embedding same models as docs
Vector Search multi-domain FAISS
Score Calculation & Normalization
Result Ranking cross-domain
RAG Generation
Context Building from top-K chunks
Prompt Construction query + context
Input Processing
Starting URL
URL Validation
Domain Mapping
Web Crawling
Concurrent Requests aiohttp
Rate Limiting & Retry Logic
Robots.txt Check
Page Fetching
Content Processing


LLM Generation
Gemini
Source Attribution
& Metadata
Final Response
HTML Parsing
trafilatura
Text Extraction
& Cleaning
Metadata Extraction
title, links, etc.
Link Classification
internal/external
Storage Layer
Domain Folder
Creation
Dual Persistence
JSON Storage
machine readable
YAML Storage
human readable
Individual Files
per document
Embedding Pipeline
Document Loading



🚀 Quick Start

Prerequisites

- Python 3.8+

- Gemini API key from Google AI Studio
- Git for cloning the repository

1. Installation & Setup

```
# Clone the repository
git clone <your-repository-url>
cd docs-crawler

# Create virtual environment (recommended)
python -m venv venv

# Activate virtual environment
# On Windows:
venv\Scripts\activate
# On macOS/Linux:
source venv/bin/activate

# Install dependencies
pip install -r requirements.txt
```

2. Configuration

Create a `.env` file in the project root:

```
# Required: Gemini API Configuration
GEMINI_API_KEY=your_gemini_api_key_here

# Optional: Crawler Settings (defaults shown)
MAX_CONCURRENT_REQUESTS=10
REQUEST_TIMEOUT=30
RETRY_ATTEMPTS=3
DELAY_BETWEEN_REQUESTS=1

# Optional: Storage Settings
DATA_DIR=./data
LOG_LEVEL=INFO

# Optional: Embedding Settings
CHUNK_SIZE=1000
CHUNK_OVERLAP=100
MAX_CHUNKS_PER_DOC=50

# Optional: FastAPI Settings
API_HOST=0.0.0.0
API_PORT=5002
```

3. Start the System

Option A: Using the run server script (Recommended)

```
python run_server.py
```

Option B: Direct FastAPI execution

```
cd src
python main.py
```

Option C: Using the deployment script

```
# For full deployment with frontend
.\deploy.bat
```

The API will be available at:

- **API Server**: http://localhost:5002
- **API Documentation**: http://localhost:5002/docs
- **Frontend** (if deployed): http://localhost:3000

📡 Complete API Reference

Endpoint Quick Reference

Area	Method	Path	Description
Health	GET	`/`	Basic health check
System Status	GET	`/status`	Overall system status and metrics
Start Crawl	POST	`/crawl`	Start asynchronous crawl for a domain
Task Status	GET	`/tasks/{task_id}`	Check status/progress of background tasks
Generate Embeddings	POST	`/embed`	Build/refresh embeddings for a domain
Single-Domain Query	POST	`/query`	Query a single domain
Multi-Domain Query	POST	`/query/multi-domain`	Query across multiple domains
List Domains	GET	`/domains`	List available domains and their status
Domain Documents	GET	`/domains/{domain}/documents`	List stored documents for a domain
Validate Domains	POST	`/domains/validate`	Validate domains for querying/embeddings
Domain Stats	GET	`/domains/{domain}/stats`	Detailed statistics for a specific domain

Area	Method	Path	Description
Bulk Crawl	POST	`/bulk/crawl`	Start multiple domain crawls in one request

System Endpoints

Health Check

```
GET /
```

Response: System status and available features

System Status

```
GET /status
```

Response: Detailed system information including active domains, task counts, and resource usage

Crawling Operations

Start Domain Crawling

```
POST /crawl
Content-Type: application/json

{
    "url": "https://docs.livekit.io",
    "domain_name": "livekit-docs",     # optional, auto-generated from URL if omitted
    "max_depth": 10,                  # optional, default: 5
    "max_pages": 1000                 # optional, default: 500
}
```

Response: Task ID for tracking progress

Track Crawling Progress

```
GET /tasks/{task_id}
```

Response: Task status, progress, and completion details

Embedding Operations

Generate Domain Embeddings

```
POST /embed
Content-Type: application/json

{
    "domain": "livekit-docs",
    "force_rebuild": false,           # optional, default: false
    "chunk_size": 1000,              # optional, uses config default
    "chunk_overlap": 100             # optional, uses config default
}
```

Response: Task ID for embedding generation tracking

Query Operations

Single Domain Query

```
POST /query
Content-Type: application/json

{
    "query": "How do I set up authentication?",
    "domain": "livekit-docs",
    "top_k": 5,                      # optional, default: 5
    "include_context": true,         # optional, default: true
    "min_relevance_score": 0.7       # optional, default: 0.0
}
```

Multi-Domain Query

```
POST /query/multi-domain
Content-Type: application/json

{
    "query": "How to implement real-time features?",
    "domains": ["livekit-docs", "docs-streamlit-io"],
    "top_k": 8,                      # optional, total results across domains
    "per_domain_k": 4,              # optional, candidates per domain
    "include_context": true,
    "merge_strategy": "score_based"  # optional: "score_based" or "round_robin"
}
```

Domain Management

List Available Domains

```
GET /domains
```

Response: List of domains with crawling and embedding status

Get Domain Documents

```
GET /domains/{domain_name}/documents?format_type=json&limit=100&offset=0
```

Parameters:

- `format_type` : "json" or "yaml" (default: json)
- `limit` : Number of documents to return (default: 100)
- `offset` : Pagination offset (default: 0)

Validate Domains for Querying

```
POST /domains/validate
Content-Type: application/json

{
    "domains": ["livekit-docs", "streamlit-docs"]
}
```

Response: Validation status per domain with embedding availability

Advanced Operations

Domain Statistics

```
GET /domains/{domain_name}/stats
```

Response: Comprehensive domain statistics including document count, embedding status, index size, and performance metrics

Bulk Operations

```
POST /bulk/crawl
Content-Type: application/json

{
    "urls": [
        {"url": "https://docs.livekit.io", "domain_name": "livekit"},
        {"url": "https://docs.streamlit.io", "domain_name": "streamlit"}
    ],
    "max_concurrent": 2              # optional, default: 3
}
```

📁 Detailed Project Structure

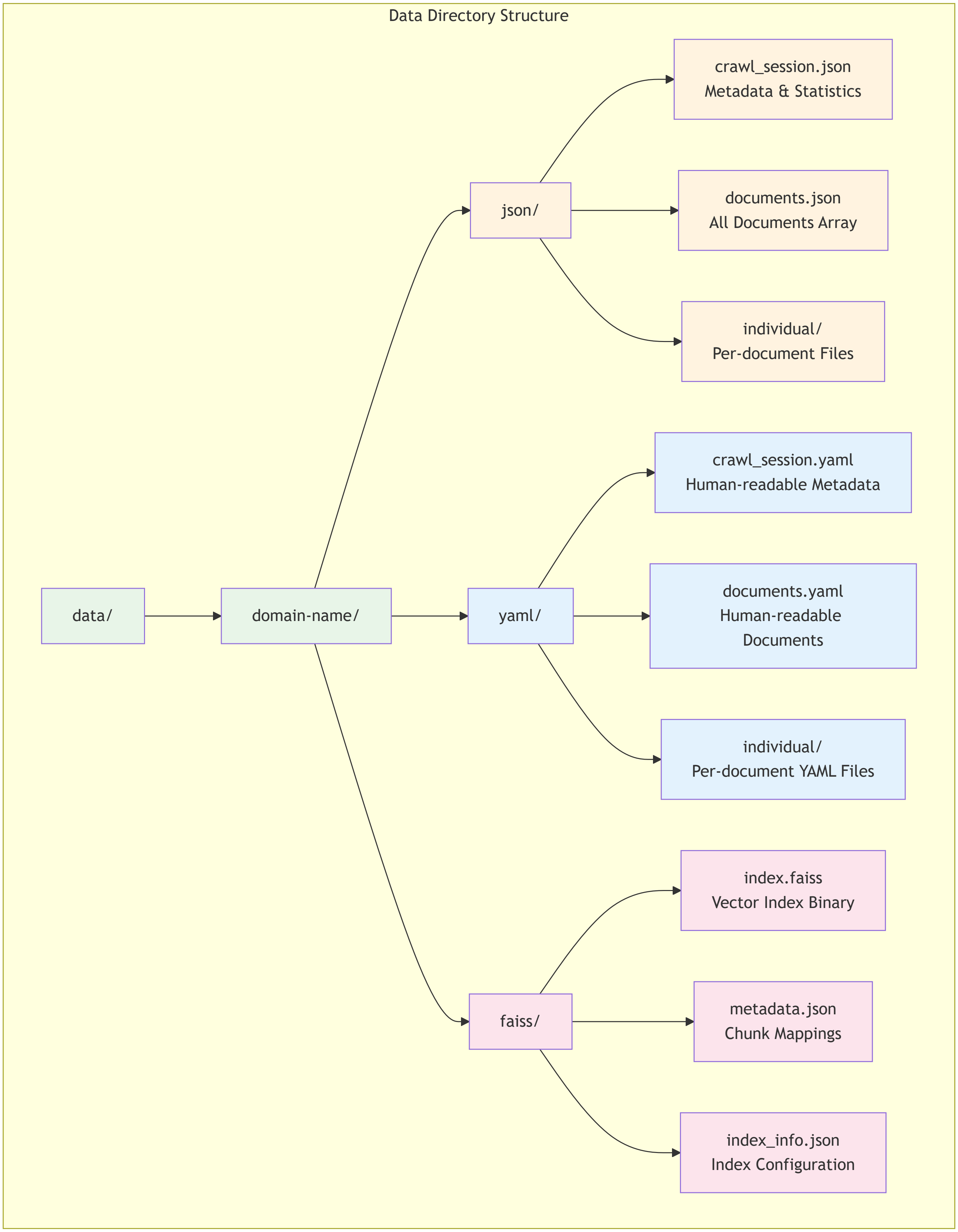
```
docs-crawler/
├── 📄 README.md                  # This comprehensive documentation
├── 📄 requirements.txt           # Python dependencies
├── 📄 run_server.py              # Main server launcher with path setup
├── 📄 deploy.bat                 # Full deployment script (backend + frontend)
├── 📄 .env.example               # Environment variables template
│
├── 📁 src/                       # Core application source code
│   ├── 📄 main.py                # FastAPI application entry point
│   ├── 📄 asgi.py                # ASGI production configuration
│   ├── 📄 wsgi.py                # WSGI production configuration
│   │
│   ├── 📁 config/                # Configuration management
│   │   ├── 📄 __init__.py
│   │   └── 📄 settings.py        # Environment-based settings with validation
│   │
│   ├── 📁 api/                   # FastAPI routes and models
│   │   ├── 📄 __init__.py
│   │   ├── 📄 endpoints.py       # All API route definitions and handlers
│   │   └── 📄 models.py          # Pydantic request/response models
│   │
│   ├── 📁 crawler/               # Web crawling engine
│   │   ├── 📄 __init__.py
│   │   ├── 📄 web_crawler.py     # Async web crawler with rate limiting
│   │   └── 📄 content_parser.py  # Content extraction with trafilatura
│   │
│   ├── 📁 storage/               # Data persistence layer
│   │   ├── 📄 __init__.py
│   │   ├── 📄 storage_manager.py # Domain-based storage orchestration
│   │   ├── 📄 schemas.py         # Data schemas and models
│   │   └── 📄 azure_blob.py      # Cloud storage integration (future)
│   │
│   ├── 📁 embeddings/            # Vector embeddings and search
│   │   ├── 📄 __init__.py
│   │   ├── 📄 embedding_service.py # Multi-model embedding generation
│   │   ├── 📄 vector_store.py    # Single domain FAISS operations
│   │   └── 📄 multi_domain_vector_store.py # Cross-domain search orchestration
│   │
│   ├── 📁 qa/                    # Question answering system
│   │   ├── 📄 __init__.py
│   │   └── 📄 rag_pipeline.py      # RAG implementation with context management
│   │
│   ├── 📁 utils/                   # Utility modules
│   │   ├── 📄 __init__.py
│   │   ├── 📄 logger.py            # Structured logging configuration
│   │   └── 📄 url_utils.py         # URL normalization and validation
│   │
│   └── 📁 data/                    # Domain-organized data storage
│       ├── 📁 {domain-name}/       # Auto-created per crawled domain
│       │   ├── 📁 json/            # Machine-readable JSON files
│       │   │   ├── 📄 crawl_session.json      # Crawl metadata and stats
│       │   │   ├── 📄 documents.json          # All documents collection
│       │   │   └── 📁 individual/            # Individual document files
│       │   │       ├── 📄 doc-1.json
│       │   │       └── 📄 doc-2.json
│       │   ├── 📁 yaml/            # Human-readable YAML files
│       │   │   ├── 📄 crawl_session.yaml
│       │   │   ├── 📄 documents.yaml
│       │   │   └── 📁 individual/
│       │   └── 📁 faiss/           # Vector index files
│       │       ├── 📄 index.faiss            # FAISS vector index
│       │       ├── 📄 metadata.json          # Chunk-to-document mapping
│       │       └── 📄 index_info.json        # Index configuration
│       └── 📁 logs/                # Application logs
│           ├── 📄 crawler_YYYYMMDD.log
│           ├── 📄 embedding_YYYYMMDD.log
│           └── 📄 api_YYYYMMDD.log
│
├── 📁 dfrontend/                   # Static web frontend
│   ├── 📄 index.html               # Main frontend application
│   ├── 📄 package.json             # Node.js dependencies (for dev tools)
│   ├── 📄 deploy.bat               # Frontend deployment script
│   ├── 📄 run.bat                  # Local frontend server
│   ├── 📁 css/
│   │   └── 📄 styles.css           # Application styles with dark/light themes
│   ├── 📁 js/
│   │   ├── 📄 config.js            # API endpoint configuration
│   │   ├── 📄 main.js              # Core application logic
│   │   ├── 📄 api.js               # API communication layer
│   │   └── 📄 ui.js                # UI management and interactions
│   └── 📁 assets/                  # Static assets
│
├── 📁 docs/                        # Project documentation
```

```
│   ├── 📄 project_structure.md      # Detailed architecture documentation
│   ├── 📄 AZURE_DEPLOYMENT.md       # Cloud deployment guide
│   └── 📄 *.md                      # Additional design documents
│
└── 📁 tests/                        # Test suite
    ├── 📄 test_crawl.py              # Crawling functionality tests
    ├── 📄 test_imports.py            # Import validation tests
    └── 📄 test_task_formatting.py    # Background task tests
```

💾 Storage Architecture Deep Dive

Domain Folder Organization

Each crawled domain gets its own isolated storage structure:


Data Directory Structure
data/
domain-name/
json/
crawl_session.json
Metadata & Statistics
documents.json
All Documents Array
individual/
Per-document Files
yaml/
crawl_session.yaml
Human-readable Metadata
documents.yaml
Human-readable Documents
individual/
Per-document YAML Files
faiss/
index.faiss
Vector Index Binary
metadata.json
Chunk Mappings
index_info.json
Index Configuration

Storage Formats

1. JSON Format (Machine Processing)

```json
{
    "id": "doc-123",
    "url": "https://docs.example.com/guide",
    "title": "Getting Started Guide",
    "content": "Clean extracted text...",
    "metadata": {
        "crawl_timestamp": "2024-01-15T10:30:00Z",
        "content_length": 2847,
        "internal_links": ["https://docs.example.com/api"],
        "external_links": ["https://github.com/example/repo"]
    },
    "processing_info": {
        "extraction_method": "trafilatura",
        "chunk_count": 3,
        "embedded": true
    }
}
```

2. YAML Format (Human Readable)

```yaml
id: doc-123
url: https://docs.example.com/guide
title: Getting Started Guide
content: |
  Clean extracted text...

metadata:
  crawl_timestamp: 2024-01-15T10:30:00Z
  content_length: 2847
  internal_links:
    - https://docs.example.com/api
  external_links:
    - https://github.com/example/repo

processing_info:
  extraction_method: trafilatura
  chunk_count: 3
  embedded: true
```

3. FAISS Index Structure

```json
{
    "index_info": {
        "dimension": 768,
        "total_vectors": 1500,
        "index_type": "IndexFlatL2",
        "created_at": "2024-01-15T11:00:00Z"
    },
    "metadata": [
        {
            "chunk_id": "chunk-001",
            "document_id": "doc-123",
            "chunk_index": 0,
            "start_char": 0,
            "end_char": 1000,
            "faiss_index": 0
        }
    ]
}
```

🔧 Comprehensive Usage Guide

Basic Workflow Example

```python
import asyncio
import aiohttp

async def complete_workflow_example():
    """Complete example of crawling, embedding, and querying."""

    base_url = "http://localhost:5002"

    async with aiohttp.ClientSession() as session:

        # 1. Start crawling a documentation site
        print("🕷 Starting crawl...")
        crawl_data = {
            "url": "https://docs.livekit.io",
            "domain_name": "livekit-docs",
            "max_depth": 5,
            "max_pages": 100
        }

        async with session.post(f"{base_url}/crawl", json=crawl_data) as resp:
            crawl_result = await resp.json()
            crawl_task_id = crawl_result["task_id"]
            print(f"Crawl task started: {crawl_task_id}")

        # 2. Monitor crawling progress
        while True:
            async with session.get(f"{base_url}/tasks/{crawl_task_id}") as resp:
                task_status = await resp.json()
                print(f"Crawl progress: {task_status['status']} - {task_status.get('progress', 

                if task_status["status"] in ["completed", "failed"]:
                    break

            await asyncio.sleep(5)

        if task_status["status"] == "failed":
            print("❌ Crawling failed!")
            return
```

```python
print(f"✅ Crawled {task_status.get('result', {}).get('total_documents', 0)} documents"

# 3. Generate embeddings
print("🧠 Generating embeddings...")
embed_data = {
    "domain": "livekit-docs",
    "force_rebuild": False
}

async with session.post(f"{base_url}/embed", json=embed_data) as resp:
    embed_result = await resp.json()
    embed_task_id = embed_result["task_id"]
    print(f"Embedding task started: {embed_task_id}")

# 4. Monitor embedding progress
while True:
    async with session.get(f"{base_url}/tasks/{embed_task_id}") as resp:
        task_status = await resp.json()
        print(f"Embedding progress: {task_status['status']} - {task_status.get('progres

        if task_status["status"] in ["completed", "failed"]:
            break

    await asyncio.sleep(5)

if task_status["status"] == "failed":
    print("❌ Embedding generation failed!")
    return

print(f"✅ Generated embeddings for {task_status.get('result', {}).get('total_chunks',

# 5. Query the documentation
print("🔍 Querying documentation...")
queries = [
    "How do I set up authentication?",
    "What are the rate limits?",
    "How to handle real-time events?"
]

for query in queries:
    query_data = {
        "query": query,
                "domain": "livekit-docs",
                "top_k": 3,
                "include_context": True
            }

            async with session.post(f"{base_url}/query", json=query_data) as resp:
                result = await resp.json()

                print(f"\n❓ Query: {query}")
                print(f"💬 Answer: {result['answer'][:200]}...")
                print(f"📚 Sources: {len(result['sources'])} documents")
                print(f"⚡ Response time: {result['metadata']['response_time_ms']}ms")

# Run the complete workflow
asyncio.run(complete_workflow_example())
```

Multi-Domain Query Example

```python
async def multi_domain_example():
    """Example of querying across multiple domains."""

    base_url = "http://localhost:5002"

    async with aiohttp.ClientSession() as session:
        # Query multiple domains simultaneously
        query_data = {
            "query": "How to implement real-time messaging?",
            "domains": ["livekit-docs", "docs-streamlit-io", "twilio-com"],
            "top_k": 10,
            "per_domain_k": 4,
            "include_context": True,
            "merge_strategy": "score_based"
        }

        async with session.post(f"{base_url}/query/multi-domain", json=query_data) as resp:
            result = await resp.json()

            print(f"🔍 Multi-domain query results:")
            print(f"💭 Answer: {result['answer']}")
            print(f"📚 Total sources: {len(result['sources'])}")

            # Show sources by domain
            domain_counts = {}
            for source in result['sources']:
                domain = source['domain']
                domain_counts[domain] = domain_counts.get(domain, 0) + 1

            print("📊 Sources by domain:")
            for domain, count in domain_counts.items():
                print(f"  - {domain}: {count} sources")

asyncio.run(multi_domain_example())
```

🎯 Core Components Deep Dive

1. Web Crawler (`src/crawler/`)

The crawler is built on `aiohttp` for high-performance async operations:

Key Features:

- **Concurrent crawling**: Configurable concurrent request limits
- **Smart rate limiting**: Respectful crawling with delays
- **Retry logic**: Exponential backoff for failed requests
- **Content filtering**: Domain restrictions and content validation
- **Metadata extraction**: Comprehensive page metadata capture

Crawler Configuration:

```
# In .env file
MAX_CONCURRENT_REQUESTS=10    # Concurrent requests per domain
REQUEST_TIMEOUT=30           # Timeout per request (seconds)
RETRY_ATTEMPTS=3             # Max retry attempts
DELAY_BETWEEN_REQUESTS=1     # Delay between requests (seconds)
```

2. Content Parser (`src/crawler/content_parser.py`)

Uses `trafilatura` for clean text extraction:

Features:

- **Clean text extraction**: Removes ads, navigation, footers
- **Metadata preservation**: Titles, links, publication dates
- **Link classification**: Internal vs external link identification
- **Content validation**: Quality checks and minimum content requirements

3. Storage Manager (`src/storage/`)

Domain-based storage with dual persistence:

Key Capabilities:

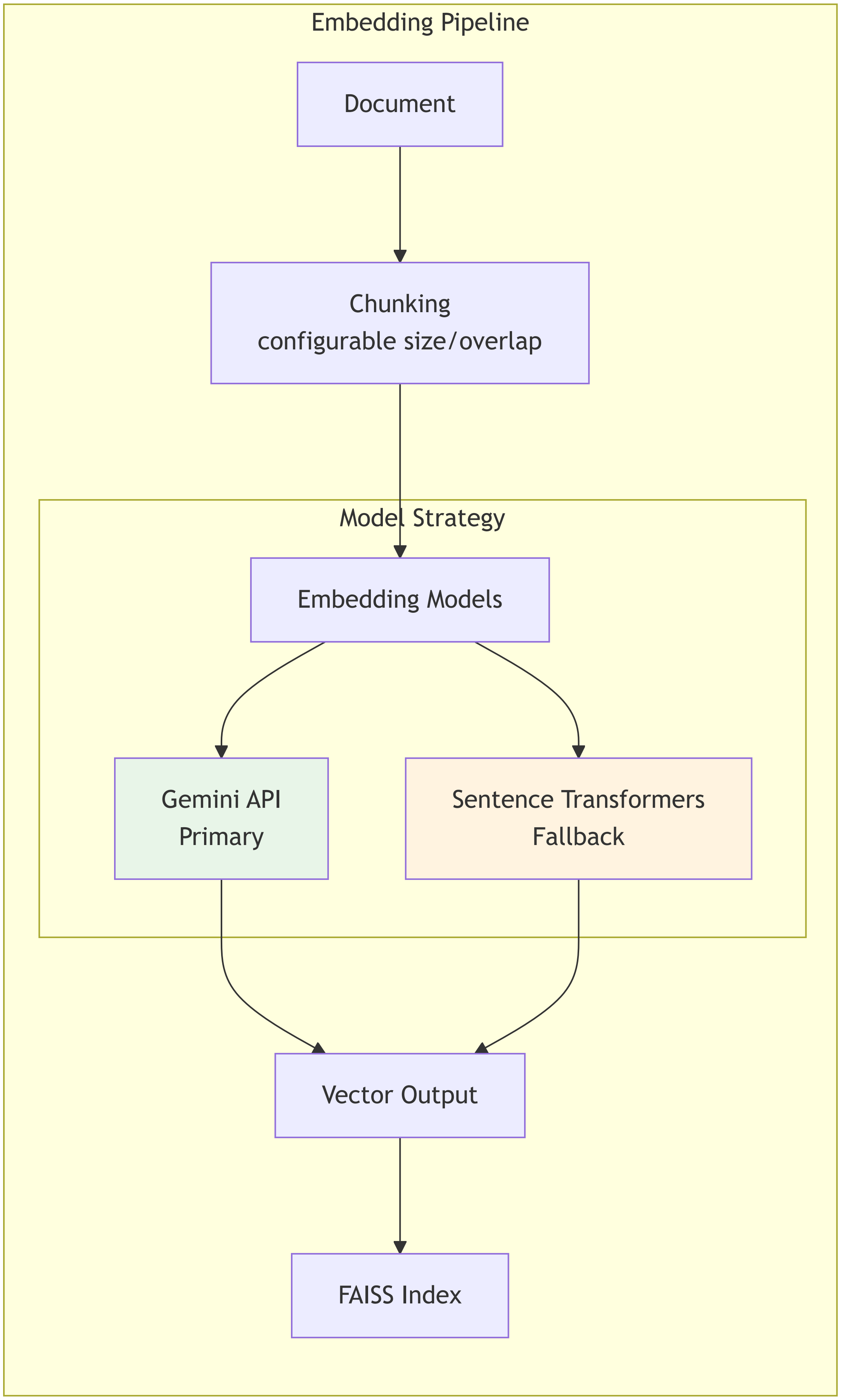
- **Automatic domain folders**: Creates organized directory structure

- **Dual format saving**: JSON for machines, YAML for humans
- **Individual file storage**: Each document as separate file
- **Efficient retrieval**: Fast document loading and querying
- **Session tracking**: Complete crawl session metadata

4. Embedding Service (`src/embeddings/`)

Multi-model embedding generation with fallback:

Architecture:



Configuration Options:

```
CHUNK_SIZE=1000              # Characters per chunk
CHUNK_OVERLAP=100            # Overlap between chunks
MAX_CHUNKS_PER_DOC=50        # Limit chunks per document
```

5. Vector Store (`src/embeddings/vector_store.py`)

FAISS-based similarity search:

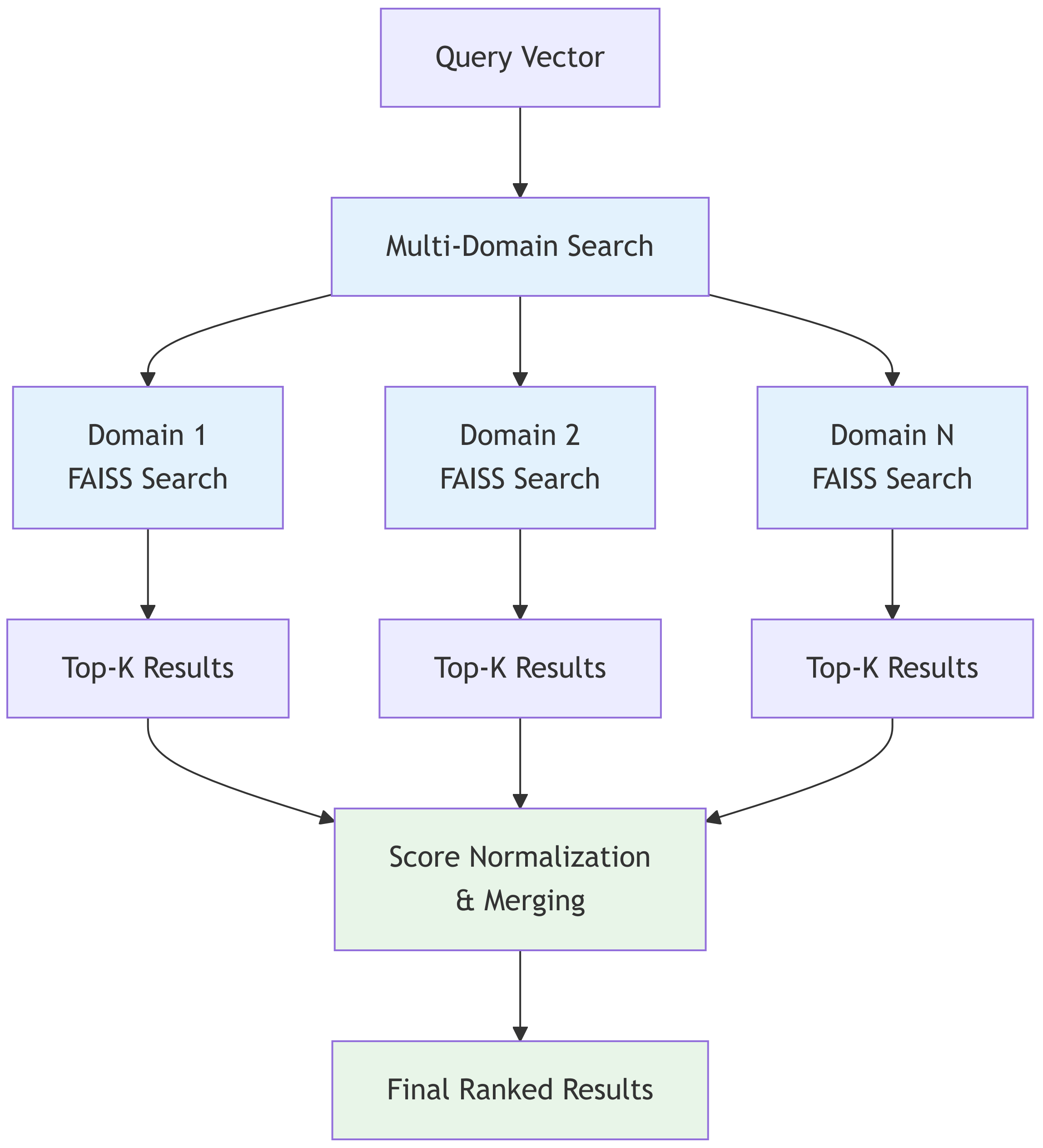
Features:

- **High-performance search**: Optimized FAISS indexes
- **Metadata integration**: Chunk-to-document mapping
- **Persistent storage**: Serialized indexes to disk
- **Score normalization**: Consistent scoring across domains

6. Multi-Domain Vector Store

Orchestrates cross-domain search:

Search Strategy:



7. RAG Pipeline (`src/qa/rag_pipeline.py`)

Complete question-answering system:

Pipeline Steps:

1. **Query embedding**: Convert question to vector
2. **Similarity search**: Find relevant document chunks
3. **Context building**: Assemble context from top results
4. **Prompt construction**: Build LLM prompt with context
5. **Answer generation**: Generate response with Gemini

6. **Source attribution**: Link answer back to sources

RAG Configuration:

```
# Query parameters
top_k=5                      # Number of chunks to retrieve
include_context=True         # Include source context in response
min_relevance_score=0.0      # Minimum similarity score threshold
```

🔍 Monitoring and Debugging

Logging System

Comprehensive logging across all components:

```
# Log levels available
LOG_LEVEL=DEBUG              # Verbose debugging information
LOG_LEVEL=INFO               # General information (default)
LOG_LEVEL=WARNING            # Warning messages only
LOG_LEVEL=ERROR              # Error messages only
```

Log Files Location:

```
data/logs/
├── crawler_YYYYMMDD.log     # Web crawling logs
├── embedding_YYYYMMDD.log   # Embedding generation logs
├── api_YYYYMMDD.log         # API request/response logs
└── system_YYYYMMDD.log      # General system logs
```

Background Task Monitoring

Track long-running operations:

```
# Get task status
curl http://localhost:5002/tasks/{task_id}

# Response format
{
    "task_id": "crawl-abc123",
    "status": "running",        # pending, running, completed, failed
    "progress": 45,             # Percentage complete
    "started_at": "2024-01-15T10:00:00Z",
    "completed_at": null,
    "result": null,             # Available when completed
    "error": null               # Available if failed
}
```

System Health Monitoring

```
# System status endpoint
curl http://localhost:5002/status

# Response includes
{
    "status": "healthy",
    "uptime_seconds": 3600,
    "active_tasks": 2,
    "available_domains": ["domain1", "domain2"],
    "domains_with_embeddings": ["domain1"],
    "storage_info": {
        "total_documents": 1500,
        "total_size_mb": 45.2
    },
    "memory_usage": {
        "current_mb": 512,
        "peak_mb": 768
    }
}
```

🚀 Deployment

Render Deployment

This application is configured for deployment on Render with both Docker and native Python support.

Files Created for Deployment:

- `Procfile` - Process definition for native Python deployment
- `Dockerfile` - Container configuration for Docker deployment
- `gunicorn.conf.py` - Gunicorn configuration for production WSGI server
- Updated `requirements.txt` - Added gunicorn dependency

Deployment Steps:

1. **Connect Repository**: Connect your GitHub repository to Render
2. **Choose Deployment Method**:
   - **Docker**: Select "Docker" as runtime, uses `Dockerfile`
   - **Native Python**: Select "Python", uses `Procfile` and `requirements.txt`
3. **Environment Variables**: Set the following in Render dashboard:

   ```
   GEMINI_API_KEY=your_gemini_api_key
   PYTHONPATH=/app/src
   LOG_LEVEL=INFO
   ```

4. **Build & Deploy**: Render will automatically build and deploy your application

Production Configuration:

- Uses Gunicorn with Uvicorn workers for optimal FastAPI performance
- Automatically scales workers based on CPU cores
- Configurable via `gunicorn.conf.py`
- Supports Render's dynamic PORT assignment

📝 License

[Add your license information here]

🤝 Contributing

1. Fork the repository
2. Create a feature branch
3. Make your changes
4. Add tests if applicable
5. Submit a pull request

📞 Support

For issues and questions:

- Create an issue on GitHub
- Check the logs in `data/logs/`