RAG in 7 Days: Building a Production-Ready RAG System

Table of Contents

Introduction

- · What is RAG?
- How RAG Works?
- Project Overview
- Key Features
- Prerequisites

Day 1: Foundation & Setup

- Understanding RAG Architecture
- Development Environment Setup
- Project Structure and Configuration
- Hands-on Implementation
- Testing Your Setup

Day 2: Document Processing

- Document Upload System
- Text Extraction
- Content Preprocessing

Day 3: Embeddings & Vector Storage

- Understanding Embeddings
- Vector Database Setup
- Implementation

Day 4: Retrieval System

- Search Implementation
- Query Processing
- Performance Optimization

Day 5: Generation & Integration

- OpenAl Integration
- Chat Interface
- Context Management

Day 6: Advanced Features

- Project Management
- Progress Tracking
- Advanced Search

Day 7: Production & Optimization

- Performance Optimization
- Error Handling
- Deployment

Appendices

- API Reference
- Configuration Guide
- Troubleshooting Guide
- Best Practices
- Additional Resources