RAG WITH ENHANCED COMPLEX TABLE HANDLING AND SMART CHUNKING

aws | soft**serve**

If your documents have complex structures and tables that general RAG systems can't handle, our specialized solution is here to help. We introduce **RAG (Retrieval Augmented Generation) with Enhanced Complex Table Handling and Smart Chunking**—an advanced tool designed for processing hierarchical tables and improving accuracy by segmenting documents into meaningful parts.

TACKLE COMMON CHALLENGES IN COMPLEX DOCUMENT AND HIERARCHICAL TABLE ANALYSIS WITH OUR SOLUTION

Data Extraction
Streamline extraction and interpretation of complex table data from images

Evaluation Framework
Develop a robust framework for assessing various table complexities

Large Tables
Resolve inaccuracies in large, nested tables where traditional methods fall short

UNLOCK YOUR BUSINESS POTENTIAL WITH ADVANCED RAG TABLE ALGORITHMS

Identify and process complex tables with high precision

Intelligently chunk text for meaningful and relevant segmentation

Advance your traditional RAG framework

OPTIMIZE YOUR DATA MANAGEMENT AND UTILIZATION WITH ADVANCED RAG TABLE CAPABILITIES

Building robust enterprise search systems

Developing Gen AI-powered applications and chatbots

Enhancing analytical models with precise data extraction from complex documents

KEY FEATURES

- **Advanced Hierarchical Table Processing:** Handles complex and hierarchical table structures within documents, enabling precise data extraction and analysis, essential for robust data-driven decision-making

- **Smart Document Chunking:** Implements intelligent segmentation of documents into meaningful parts, enhancing the accuracy and relevance of information retrieved, which is crucial for high-quality data interpretation and utilization

- **Enhanced RAG System Compatibility:** Seamlessly enhances Retrieval-Augmented Generation applications, improving enterprise search, sophisticated chatbots, and other RAG-based applications. It offers a specialized tool to tackle complex data challenges

BUSINESS VALUE

- **Comprehensive Evaluation:** Conducted detailed evaluations on easy, medium, and hard tables to assess solution efficacy rigorously

- **Performance Excellence:** Achieved 85% accuracy on the challenging HiTab dataset, significantly surpassing initial benchmarks of 50% accuracy

- **Cost Efficiency and Low Latency:** Streamlined processes reduce latency and operational costs by avoiding direct image inputs to large language models, enhancing cost-effectiveness

PARTNER WITH US FOR AI-DRIVEN INNOVATION AND ACCELERATED SOLUTION DELIVERY

ADVANCED RAG WITH TABLES PILOT   **6 WEEKS**

Design, build, and validate a content moderation proof-of-concept for your selected business use case

RAPID AI ASSESSMENT	PILOT
1 WEEK	5 WEEKS

DELIVERABLES
- An executive assessment report
- Problem statements, use cases, and success criteria
- A high-level Advanced RAG with Tables Pilot design, scope, and roadmap

DELIVERABLES
- A feasibility report describing the main solution capabilities, limitations, and performance metrics
- Technical Advanced RAG with Tables design documentation
- A standalone functional prototype of a Advanced RAG with Tables for the selected use case
- An MVP architecture and roadmap

CONTACT US TO DISCUSS NEXT STEPS: awsops@softserveinc.com