



Milestone AI: The Corporate Digital Consultant



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Client Profile



Who is Milestone?

A premier ISO-certified contracting firm specializing in complex B2B fit-outs.

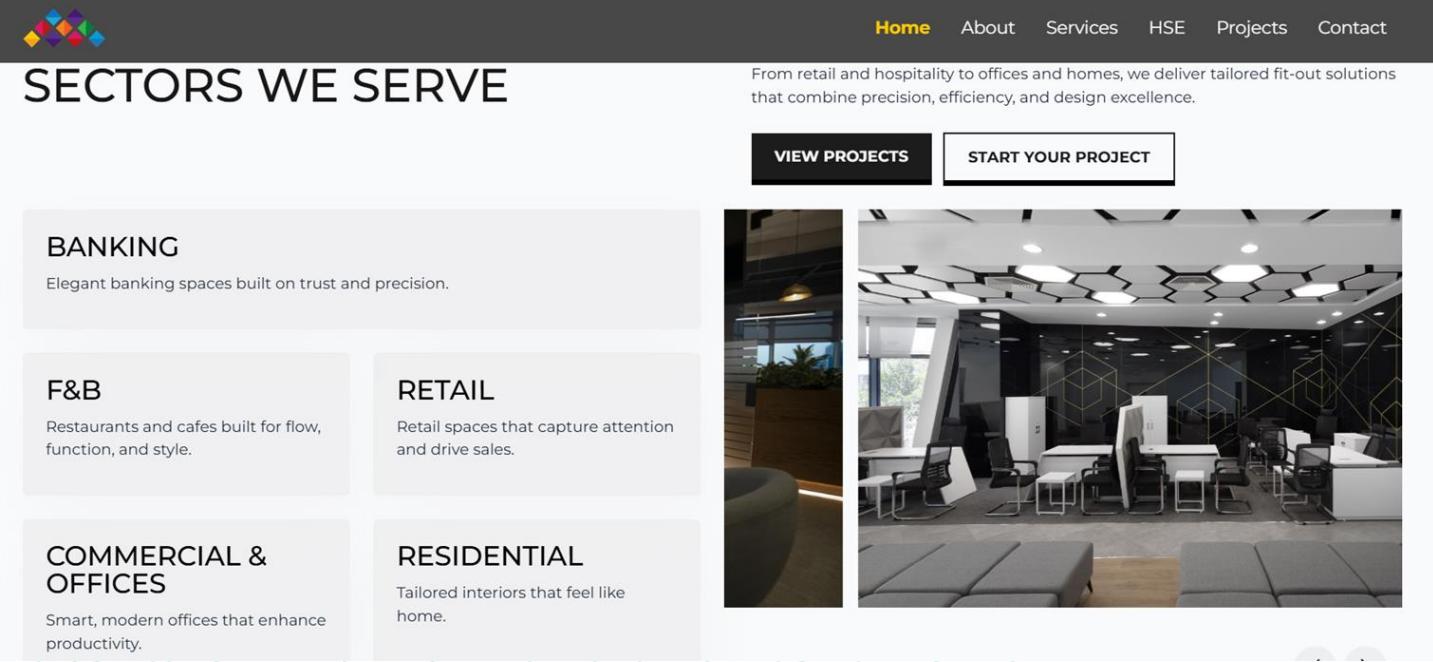
- **Core Pillars:** Precision Contracting & Integrated Project Management.

Key Credentials:

- **Experience:** 11+ Years of market leadership .
- **Certifications:** ISO 9001, 14001, 45001 .
- **Signature Clients:** Zepter International, Banque Misr, Etisalat .

Business Problem

The Information Gap in B2B Procurement



SECTORS WE SERVE

BANKING
Elegant banking spaces built on trust and precision.

F&B
Restaurants and cafes built for flow, function, and style.

COMMERCIAL & OFFICES
Smart, modern offices that enhance productivity.

RESIDENTIAL
Tailored interiors that feel like home.

From retail and hospitality to offices and homes, we deliver tailored fit-out solutions that combine precision, efficiency, and design excellence.

Home About Services HSE Projects Contact

VIEW PROJECTS START YOUR PROJECT

*static website requires users to dig through multiple pages

11/30/25

The Friction:

- High-stakes B2B procurement managers need specific answers *fast* (e.g., "What is your tax ID?", "Do you have banking experience?").
- Static websites bury this data in PDFs.
- Waiting for an email response creates a "Trust Gap."

The Need:

- An instant, automated interface that delivers **verified facts** without the risk of AI "hallucination."



Project Overview

! The Problem

Procurement Engineers often face delays when extracting specific technical compliance data (e.g., ISO certifications, Safety Plans) from massive internal PDF/CSV documentation. Manual email inquiries create bottlenecks.

💡 The Solution

A RAG-powered Chatbot deployed on Streamlit. It allows clients to query our proprietary knowledge base directly via a secure web link, receiving instant, factual answers.

Unique Value Proposition

Zero hallucination risk by strictly grounding answers in the *Milestone QA Dataset*. Accessible 24/7 via web browser without specialized software. Delivers a centralized, online knowledge assistant that empowers users to retrieve specific compliance and methodology details instantly through an intuitive web browser interface.

User Journey & Wireframe



Streamlit Interface Workflow

Access: Client clicks the secure Streamlit web link.

Query: User types a technical question (e.g., "What is the ISO 45001 status?").

Processing: System runs Vector Search against dataset.

Response: "We"-perspective answer displayed instantly.



Milestone Engineering Virtual Assistant

Instant access to our capabilities, safety standards, and project history

Chatbot info

Skip the wait. Ask specific questions about our execution capabilities, safety records (HSE), or request a meeting with our engineering team for your upcoming headquarters or commercial facility

Type your inquiry here (e.g., Request a company profile)...



End Users & Key Features



Procurement Engineers

Primary User: Needs rapid verification of our technical capabilities and safety standards for tender qualification.



Context-Awareness

The system remembers conversation history, allowing engineers to ask follow-up questions about specific projects seamlessly.

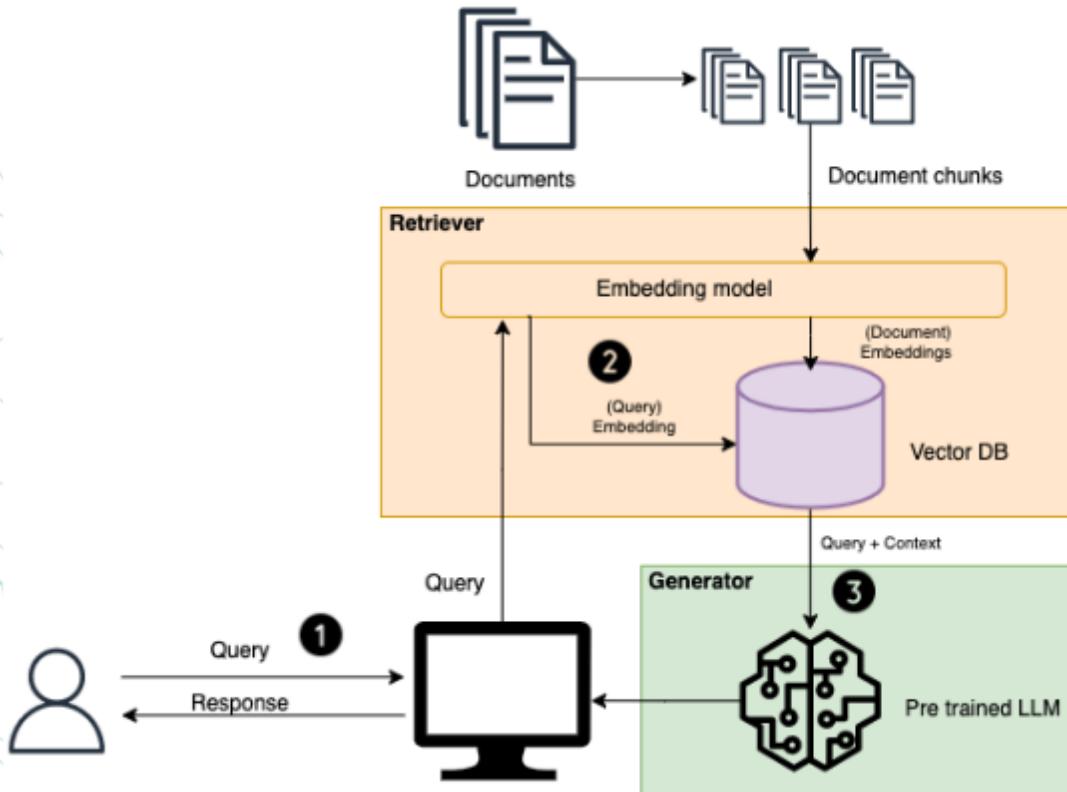


Instant Web Access

Deployed via Streamlit, eliminating the need for VPNs or software installation. Accessible from any device.



System Architecture



- ✓ **Ingestion:** The system loads the CSV, sanitizes text, and creates embeddings using Sentence-Transformers.
- ✓ **Vector Search:** User queries are embedded and matched against the FAISS index for high-speed retrieval.
- ✓ **Synthesis:** TinyLlama acts as the reasoning engine, synthesizing the retrieved context into a fluent, "We"-perspective response.

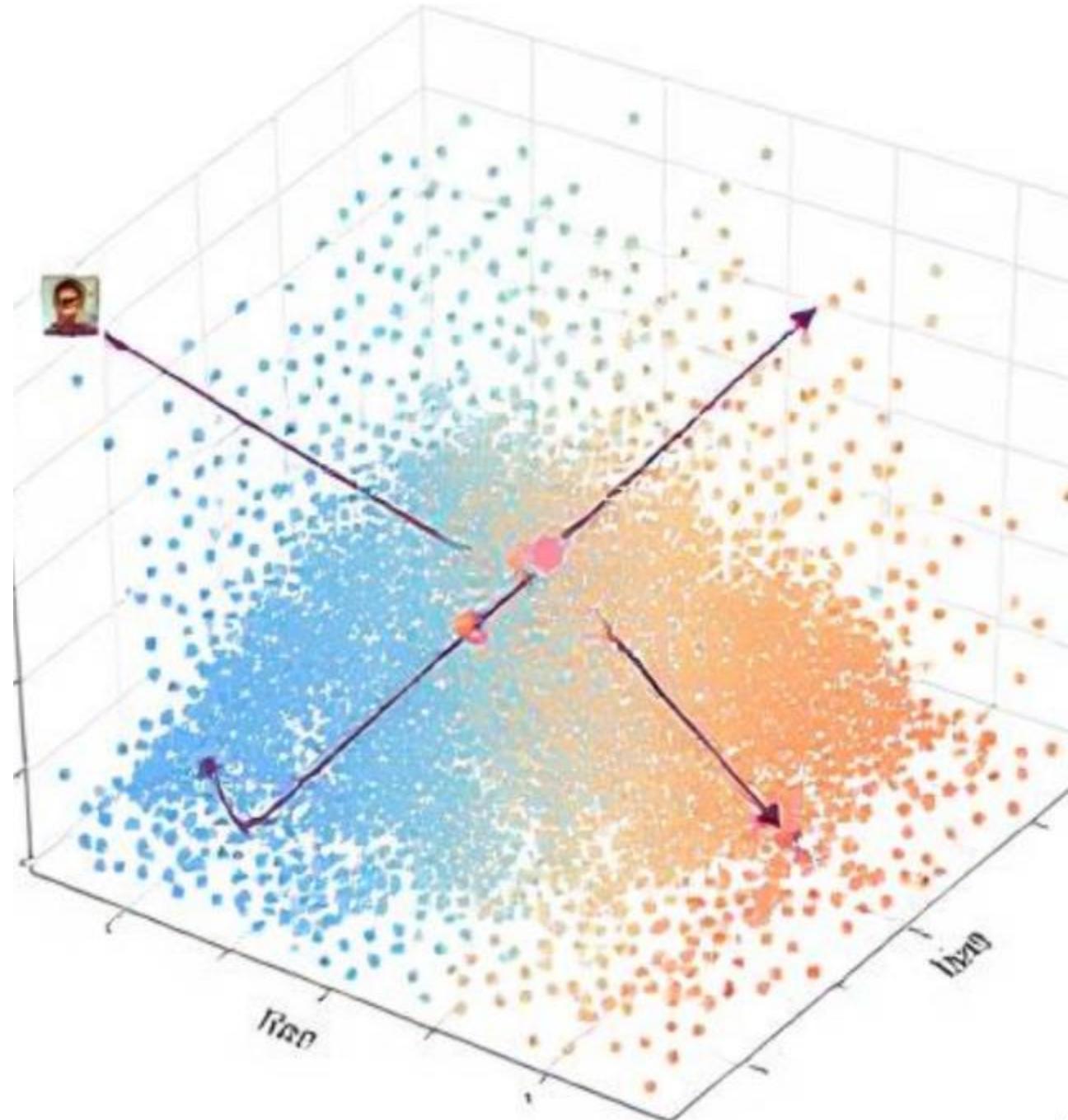
Data Architecture

Source: Milestone QA Dataset.csv

Structure: A balanced dataset consisting of **Prompt** (User Question) and **Completion** (Bot Answer) pairs, covering all ISO and Safety compliances.

Preprocessing: Advanced Regex filtering removes HTML tags and noise while strictly preserving technical "stopwords" like "ISO 9001" to maintain accuracy.

Storage: Converted into semantic vectors and stored in a FAISS FlatIP index for millisecond retrieval.





Technology Stack —



Python 3.10+

The core language used for both backend logic and frontend scripting.



Streamlit

The frontend framework chosen for its rapid deployment capabilities and native Python integration.



RAG Engine

FAISS (Vector Store)

TinyLlama (LLM)

Sentence-Transformers



Live App & Testing

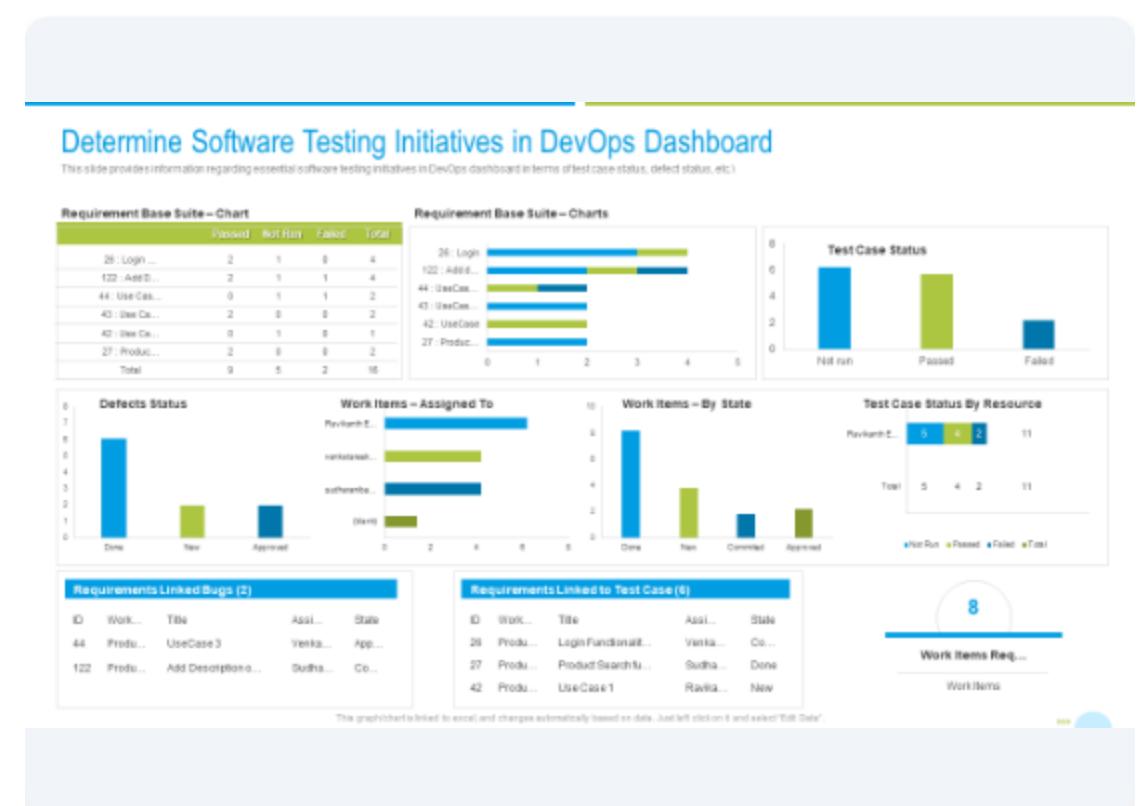


Current State: Beta

The application is live on Streamlit Cloud, currently undergoing User Acceptance Testing (UAT) with internal quality managers.

Testing Phases

- ✓ **Unit Testing:** verifying Regex cleaning patterns.
- ✓ **Integration:** Ensuring RAG pipeline correctly retrieves context.
- ✓ **Performance:** Evaluated using **Perplexity (PPL)** scores to ensure fluent, confident responses.



Project Deliverables —

Live Web App

A fully functional Streamlit application accessible via a public URL for client demonstration.

Source Code

Complete GitHub repository containing the MilestoneChatbot class, Streamlit scripts, and requirements.

Documentation

Technical specifications PDF and a User Manual for procurement engineers.

Test Report

Comprehensive report detailing Perplexity benchmarks and retrieval accuracy metrics.

Thank You