

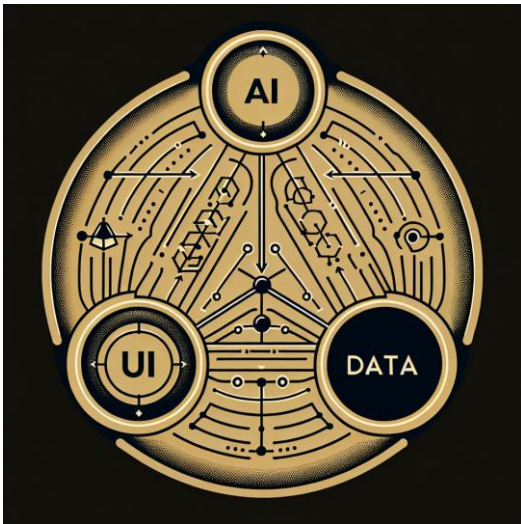
## Introduction

In an era where data is exploding at an unprecedented rate, organizations are finding it increasingly challenging to extract meaningful insights from their vast data repositories. Both unstructured data sources like text and images and structured data sources like relational databases pose significant hurdles, requiring complex, domain-specific skills to derive value. Secure GenAI by ADAICO harnesses the power of Retrieval Augmented Generation (RAG), a cutting-edge technique combining large language models (LLMs) and information retrieval, to generate more accurate and informative responses. Generative artificial intelligence (AI) has revolutionized industries by enhancing advanced information retrieval and content generation, enabling timely, data-driven decisions. According to Bloomberg Intelligence, the global Gen AI market, valued at \$40 billion in 2022, is projected to soar to \$1.3 trillion by 2032. Secure GenAI leverages these transformative capabilities to distil insights from complex organizational data, making it an essential tool for forward-thinking enterprises.

## Challenge

Despite its transformative potential, the adoption of Gen AI, particularly RAG, is fraught with challenges related to security, scalability, and governance. Organizations are grappling with questions like, "How can we safely and effectively leverage Gen AI to transform our operations using our data?" The benefits are immense: cost-effectiveness, real-time information accessibility, and enhanced decision-making. However, these advantages are counterbalanced by critical challenges: ensuring scalability, maintaining robust security, and implementing effective governance. Failure to address these challenges can lead to solutions with limited flexibility, high technical debt, and increased operational and policy risks. The pressing question remains: Can we create a technology solution that harnesses the enormous benefits of Generative AI while effectively addressing these challenges?

## Solution



Secure GenAI by ADAICO provides a robust solution to these pressing challenges. By leveraging Azure's integrated advanced capabilities in security, governance, and responsible AI, Secure GenAI allows customers to enhance user queries over custom private datasets, significantly boosting productivity. The solution adopts a modular microservices architecture, facilitating flexible, scalable, and manageable Generative AI solutions using MLOps. Our design approach stems from our insights into Generative AI that it is composed of three synergistic technology assets: data pipelines, AI logic flows, and user interface (UI) applications.

Our solution features a comprehensive data pipeline service, implemented through an Azure web application interface, enabling seamless data submission and processing. The generative AI service, developed on Azure AI Studio or Azure Machine Learning Studio, supports the development, evaluation, and deployment of Generative

AI logic. The user interface service offers an interactive platform for users to submit queries and receive enhanced responses, backed by integrated security features.



## Technology

Secure GenAI capitalizes on modern Azure infrastructure to deliver state-of-the-art solutions. It utilizes large context LLMs for summarizing extensive text and managing complex AI agent logic chains. Clients can develop innovative AI-driven solutions leveraging a range of foundation and open-source models using collaborative MLOps platforms like Azure Machine Learning. The solution ensures secure storage of unstructured and structured data through enterprise-grade vector and relational databases. By integrating proven, scalable data processing solutions on Azure, Secure GenAI addresses the critical challenges of governance, data sovereignty, scalability, and security, ensuring robust, flexible, and cost-effective AI solutions.

## Benefits

Secure GenAI offers numerous benefits to organizations. It maximizes knowledge accessibility from evolving data, ensuring data security and confidentiality: your data, your AI, your cloud. Our solution enhances search quality and insights cost-effectively at scale. Organizations can intelligently manage, secure, and reuse their data and AI assets, driving innovation and incorporating game-changing AI developments faster and more safely. This keeps you ahead of the competition, making Secure GenAI a strategic investment for any data-driven enterprise.

## Customisation

ADAICO offers a range of customizable services to maximize the value of Secure GenAI for your organization:

- **AI/ML/Data Science:** Employing advanced techniques to unlock new capabilities.
- **On-Site Evaluation:** Identifying gaps in your data ecosystems.
- **Strategy Development:** Crafting a roadmap to make your data useful.
- **Strategy Implementation:** Collaborating closely to implement your long-term vision.

Unlock the power of your data with Secure GenAI by ADAICO. This Azure-based solution utilize