Implementing AI-based Conversational Search - Offshore Development for an Agricultural Company

CONTATA

OVERVIEW

Based in Minnesota, the client is a leading player in assisting producers, businesses, and entrepreneurs in identifying and developing new markets for agricultural commodities and byproducts.

CHALLENGES

The client faced challenges with its existing model, which hampered user engagement. The sheer volume of inquiries and the need for more accessible assistance prompted them to explore alternative approaches. The client sought solutions for self-guided or cohort support to a diverse range of users, including value-added agricultural producers, food entrepreneurs, and scaling food businesses.

SOLUTION

Acting as an offshore development company, Contata proposed a comprehensive solution to address the client's challenges effectively. It involved the development and integration of a LLM and interactive Natural Language Query (NLQ) system into the client's existing website. The solution comprised of 5 main components:

INDUSTRY

- Agriculture

SERVICES

- Conversational Search Implementation
- Azure AI Search

TECHNOLOGY

- Naturel Language Query
- Machine Learning
- Large Language Model (LLM)
- GPT 3.5 Turbo
- Microsoft Azure AI Services
- Azure AI Search Services

- **Large Language Model (LLM)** - We integrated a large language model (LLM) leveraging Microsoft Azure OpenAI Services & Azure AI Search Service to interpret and respond to complex queries.

- **Content Repository** - A centralized repository containing a wealth of original and curated content, including email correspondence, written documents, online guides, videos, and curated content from reputable external sources.

- **Search Engine** - Advanced search algorithms such as keyword, vector, and hybrid searches to ensure accurate retrieval of relevant information.

- **UI/App Frontend** - A user-friendly interface to facilitate conversational interactions, maintaining context throughout the conversation, and providing tailored responses to user queries.

- **Analytics Repository** – An analytics repository for storing and analyzing user interactions and feedback to continuously improve the system's performance.

The system enabled users to interact with databases using natural language, providing a more intuitive and accessible experience.
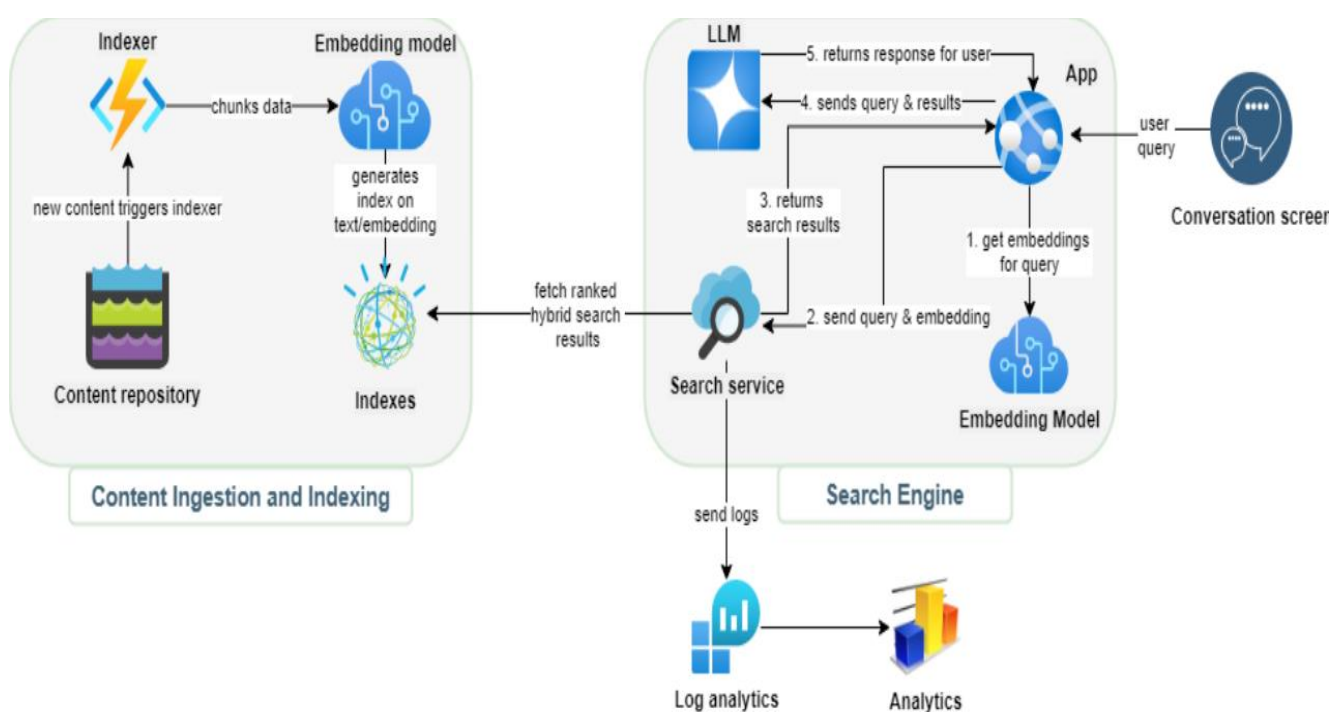
BENEFITS

- **Improved User Engagement** - Enabled users to access relevant information more intuitively, resulting in improved engagement and satisfaction.

- **Self-Guided Support** - Users could now access guidance and support on various topics independently, reducing the burden on the client's support team and enhancing scalability.

- **Enhanced Accessibility** - The system's user-friendly interface made it accessible across desktop and mobile platforms, catering to a wider audience.

- **Efficient Knowledge Management** - By centralizing content and leveraging advanced search algorithms, the client could efficiently manage and retrieve knowledge, fostering innovation and market exploration within the agricultural sector.

About Contata

Contata Solutions is a trusted leader in technology and digital innovation. Through our work in data engineering, data analytics, machine learning, marketing automation and app development, we deliver solutions that address complex problems in ways that are simple, insightful and impactful.

Our promise and value proposition to our customers is simple: we leverage our deep technical expertise and global presence to bring software products and data-driven decision capabilities to life.

Founded in 2000, Contata is a privately-held company headquartered in Minneapolis that serves clients globally from offices in the United States and India.