



## End-to-End Digital Platform & Conversational AI Transformation for a Leading Healthcare Enterprise

### Overview

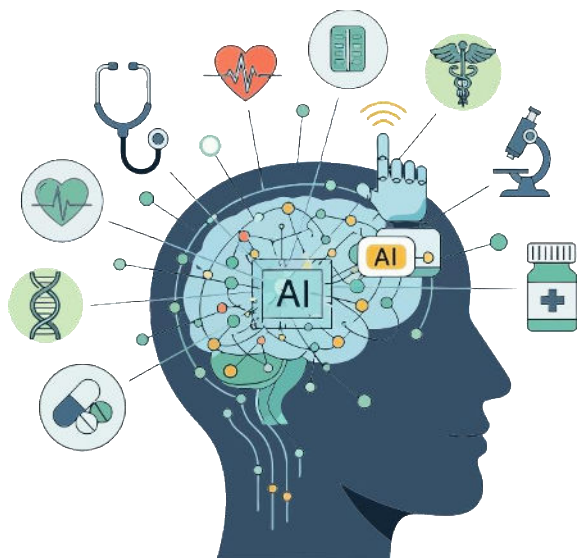
One of the leading players in the healthcare industry is aiming to create a seamlessly integrated digital ecosystem through API-driven innovations, data integration, and smart data discovery techniques. InfoVision delivered a full-scale transformation by deploying an API marketplace in the cloud, a data lake framework, and a conversational artificial intelligence system.

### The Challenge: Fragmented Data, Limited Discoverability, and Siloed Systems

The client wanted to develop an intelligent system that would enable API deployment and data consumption, and support healthcare analysis. But there were some crucial hurdles that stopped the process from happening.

Healthcare professionals' data and other data related to healthcare systems were scattered across various locations, such as documents, APIs, and even databases, creating problems. Finding relevant data on any topic was difficult for users, thereby reducing discoverability.

Moreover, a lack of an API ecosystem meant that there were no effective ways to deploy APIs.



# The Solution: API Marketplace, Data Lake, and Conversational AI Integration

InfoVision provided a comprehensive solution consisting of API marketplace creation, data engineering, and Conversational AI solutions.

A powerful cloud API marketplace was developed to offer safe API publication, management, and monetization services. It includes reliable backend APIs, integrations with the API manager and deployment of the solution on scalable cloud infrastructure.

To address data fragmentation, InfoVision implemented a data lake solution for the client's Data Labs initiative. Data is collected from various sources, cleaned, and structured to provide accurate and complete results. Tracking and audit reporting were introduced to help company leaders make informed decisions.

At the same time, InfoVision rolled out a ChatGPT solution, customized for the client and hosted on AWS. In the context of InfoVision's solution, data unification from documents, databases, and APIs enables intelligent search for the necessary information. Hybrid search methods, such as BM25 and cosine similarity, were used within FAISS and OpenSearch, combined with complex ingestion processes. Thus, the most relevant and contextual answers can be delivered to users.

Moreover, the InfoVision solution involves on-prem vLLM deployment (70B AWQ), prompt caching, streaming responses, rate shaping, and continuous improvement through reinforcement learning.

## Business Impact: Measurable Gains in Efficiency, Cost, and Experience

The transformation generated significant business benefits:

- 100% automation was achieved for core processes
- Savings of 43% were attained from operational efficiencies
- Reduced efforts by 70% during implementation and integration
- Customer satisfaction due to quick access to accurate information
- Customer engagement via web and marketplaces was enhanced
- Industry recognition gained through the successful adoption of GenAI
- Better management of content was facilitated

# Strategic Value: Scalable, Intelligent, and Future-Ready Healthcare Ecosystem

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This solution built a solid basis for digital scalability and success:

- **Scalability:** Cloud-native architecture for expanding data and API ecosystems
- **Intelligent use of data:** Consolidated data lake and AI-powered discovery foster better decisions
- **Revenue from platforms:** The API marketplace generates additional revenue streams
- **Improved user experience:** Conversational AI ensures better accessibility and interaction

AI foundation for future success: Designed to be scalable alongside AI advances in the healthcare industry