

CASE STUDY

EXPERTISE RETRIEVAL SYSTEM FOR A SOFTWARE DEVELOPMENT COMPANY

Client Background

The client is a large technology company specializing in software and applications development for leading industries including healthcare, retail, education and many more. They provide organizations with cutting-edge software to help accelerate growth and innovation, transform operational efficiency and deliver new products to market.

Business Challenge

Global competition and the pace of business require a fast response to challenges and opportunities and often subject matter experts are the best way to tackle problems because of their ability to respond to specific business opportunities or challenges.

Communication and collaboration within an organization can be slower as the company grows. This client had 3500+ employees and communication within the organization became complicated. The task to locate expertise could take anywhere from 6-8 hours to several working days. It required significant communication overhead and the quality of results weren't always perfect. Mainly due to the fact that several systems that supported daily company activities were scattered and disparate causing the information and expertise to be disconnected.

Our client needed a better way to locate corporate assets, such as knowledge, experience and information. They decided to partner with SoftServe due to the company's extensive expertise in enterprise technology solutions.

Project Description

Finding an expert is a challenging task because it can be a loosely defined concept. One example is finding a system to analyze and access "tacit knowledge" in organizations is through artifacts of "explicit knowledge" (e.g., documents). Expertise evidence usually comes from different heterogeneous sources. Not all sources are equally important or relevant. There are two basic approaches to expert search:

- Profile-based method
- Document-based method

Both have its pros and cons. For example, profiles tend to become outdated quickly or be incomplete. Document-based methods need some time for a new person to appear in the list, usually until a significant amount of expertise evidence (e.g., documents) are generated. Due to the nature of available information and evidence the SoftServe team decided to use a hybrid approach that combines the best of both methodologies.

SoftServe's solution used SQL Server Data Warehouse and Integration Services to access, transform, and clean the data collected from a number of internal systems. Then the data is combined to form a single representation of the searched entity to be indexed by ElasticSearch.

The system combines multiple data sources, including unstructured work products and structured sources such as Enterprise Directory. The "authority" of each expert in relation to an expertise is computed via the nature of the matched expertise "evidences" and their relevance.

The system naturally captured employee activities and the results of those activities without the need to fill in forms or profiles that tend to become outdated quickly. Examples of artifacts that may be used as an evidence of employee expertise include:

- External certifications
- Training attended
- Activities in projects
- Content in collaboration tools (for example, wiki pages, office documents)
- Publications on the internet
- Professional social networks
- Internal community activities (conferences, community gatherings)
- Internal knowledge sharing activities

The application provides an interactive user interface, which can benefit any business user, without extensive training or an analytical background.

Value Delivered

SoftServe's solution of corporate knowledge reuse helped our client gain competitive advantage, maximize productivity and efficiency, as well as build a collaborative environment.

Key solution's benefits:

- Significant decrease in time to locate necessary experts (10x)
- Quicker access to corporate knowledge and information
- More agile decision-making supported by larger and more quantifiable information
- Improved risk management
- Increased employee and company efficiency
- Faster response to challenges and opportunities

ABOUT US

SoftServe is a digital authority that advises and provides at the cutting-edge of technology. We reveal, transform, accelerate, and optimize the way enterprises and software companies do business. With expertise across healthcare, retail, media, financial services, software, and more, we implement end-to-end solutions to deliver the innovation, quality, and speed that our clients' users expect.

SoftServe delivers open innovation—from generating compelling new ideas, to developing and implementing transformational products and services.

Our work and client experience are built on a foundation of empathetic, human-focused design that ensures continuity from concept to release.

We empower enterprises and software companies to (re)identify differentiation, accelerate solution development, and vigorously compete in today's digital economy—No matter where you are in your journey.

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