

CASE STUDY

**Ai-Enabled Mapping Leveraging
Natural Language Processing
Decreases Onboarding Time Of
New Customers For Skilldirector**

softserve

Client Background

SkillDirector provides a SaaS platform that enables organizations to address the growing skill gap problem by creating and supporting a culture of lifelong learning. The platform, called the Self-Directed Learning Engine™ (SDLE), is an empowerment system for employees, designed to help them be great at their job. Designed for employees, the SDLE inspires employees to close their skill gaps through personalized learning based on a self-assessment for the job they have or the job they want next.

As a result of employees embracing this system, it produces rich analytics that help the organization know their capabilities, and upskill and reskill employees at the speed of business.

Companies are only starting to understand the power of competency models and how they can address the global skill gaps problem as well as employee engagement and retention. SkillDirector helps companies create or acquire role-based competency models and make them actionable. And there they can touch the lives of employees throughout their lifecycle: recruiting, onboarding, ongoing development, career planning, coaching, and mentoring. Competency models then drive competency-based learning, which ensures that talent, learning and development departments provide maximum value to the organization.

Business Challenge

There are 2 inputs to SkillDirector's SDLE: role-based competency models and competency-based learning. While there are several options for creating or buying role-based competency models, the current process to create competency-based learning is human labor-intensive.

Customers and prospects perceived the manual effort of mapping tasks to learning activities (in order to create competency-based learning) as too difficult and too time consuming. This began impacting new business opportunities.

Current customer alternatives include engaging SkillDirector to perform this service for them, or using the step-by-step instruction and materials provided by SkillDirector to do it themselves. Regardless of who does the mapping, it relies on a list of applicable activities for a role. When performed with a filtered list of activities, this process takes 1-2 weeks per role.

However, due to the often poor metadata associated with current learning activities in their Learning Management Systems, customers find it difficult to create a filtered list of activities, leaving them with potentially thousands to consider, which increases the duration, complexity, and tedium.

SkillDirector needed to scale the process of mapping learning opportunities to tasks by performing fast AI-enabled mapping, leveraging natural language processing.

This would enable them to more quickly onboard new clients by decreasing the competency-based learning development time from days to hours. And it alleviated the mental hurdle and frustration by providing customers with a way to eliminate most of the manual process. This could also be used internally to support more services work with the same resources, as well as serve as a marketing tool for differentiation.

Essentially, an AI-powered platform would give SkillDirector the ability to win more business, perform services more efficiently and profitably, and drive lead generation.



Project Description

SoftServe developed an AI-enabled solution for automatic mapping of top learning activities per each task. The core of the solution is based on applying natural language processing techniques over descriptions of learning activities and tasks, specifically calculating a ranking score from an ensemble of semantic text similarity metrics. SoftServe's leveraged technologies including: GCP BigQuery and Data Studio, Google Analytics, Compute and Cloud Storage, Python, and GitLab.

The solution is implemented on the AWS platform as a batch processing REST API service and UI application, ingesting two input Excel files for learning activities and tasks. The output mapping job is an Excel file with a filtered list of best matched activities.

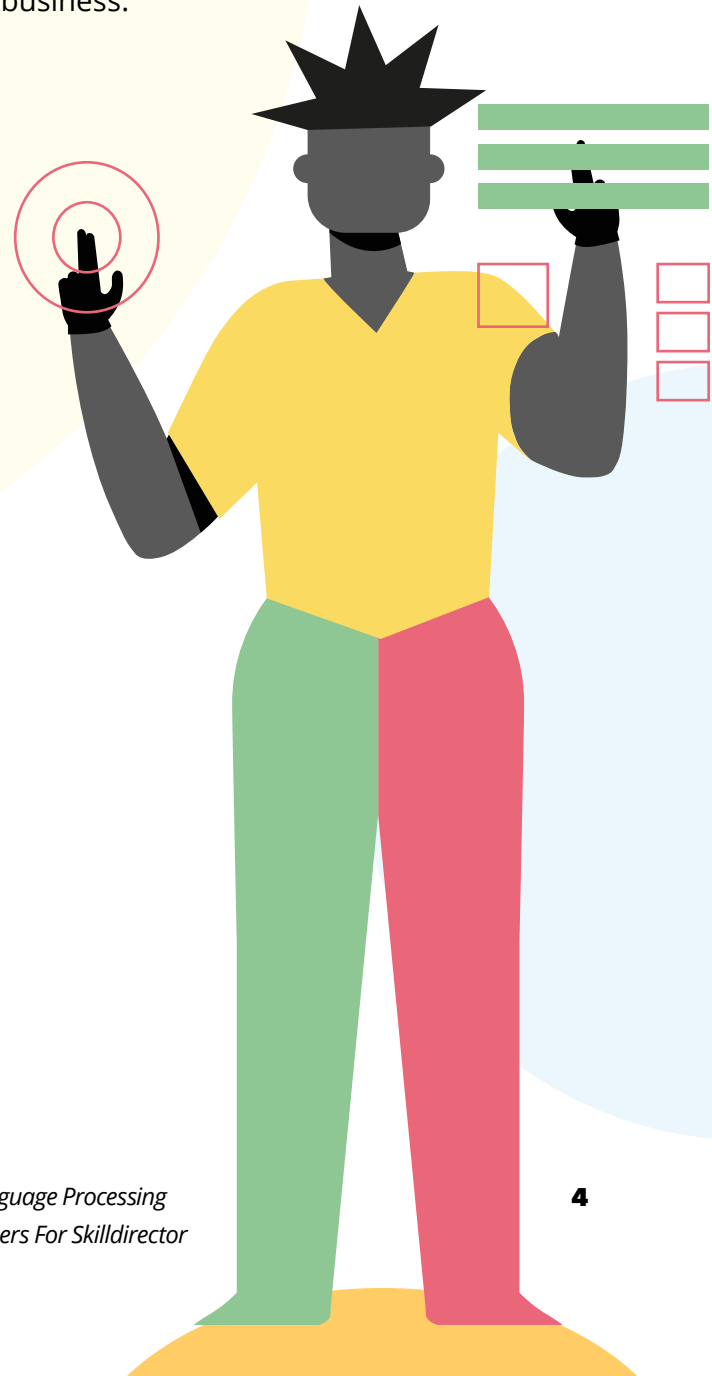
SkillDirector provided labelled data for the model development and subject matter expertise.

Tools and Technologies

- Amazon SageMaker
- AWS Batch
- Amazon Simple Storage Service
- AWS Elastic Beanstalk
- Docker
- Python
- Supervised machine learning
- Custom NLP/ML model

Value Delivered

SoftServe's AI-enabled solution, SkillDirector achieved their primary project goal of decreasing the competency-based learning development time from 2 weeks to hours. SkillDirector increased capacity through the ability to perform services more efficiently. It further differentiated SkillDirector's offering, driving lead generation. And it significantly reduced the mental hurdle and frustration of manual mapping, enabling SkillDirector to win more business.



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 is are built on a foundation of empathetic, human-focused experience 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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