Staffing Services Company Leverages AWS Machine Learning to Identify Best Applicants

Core Group Resources

Executive Summary

Formed in 2012, Core Group Resources (CGR) is a consultancy that provides staffing services to organizations in a variety of industries. Traditionally, CGR's team of 25 sifted through resumes and job descriptions manually to find high-quality matches. As the consultancy grew, this workflow became more cumbersome, preventing CGR from scaling with demand.

The business decided it was time to enhance its existing CRM platform by taking advantage of modern cloud technologies. Amazon Web Services expert ClearScale stepped in and helped CGR use machine learning to simplify the process of matching job descriptions to applications.

The Challenge

Prior to working with ClearScale, CGR employees sifted through digital resumes and job descriptions one-by-one in the company's applicant tracking system, Bullhorn. After eight years, CGR's database of CVs had grown beyond the capacity of the team. Matching applicants to vacancies by hand was inefficient from both a time and cost perspective.

CGR's leadership team determined that it needed to implement some kind of recommendation system that would automatically present high-quality candidates for job openings. The recommendation system would have to analyze text from CVs uploaded through the frontend portal and job descriptions posted by employers to calculate a match quality score.

As an AWS Premier Consulting Partner with extensive machine learning experience, ClearScale had the expertise CGR needed to bring its vision to life.

The ClearScale Solution

ClearScale used several AWS cloud technologies to build an automated scoring system around CGR's existing Bullhorn platform. ClearScale's developers used AWS Step Functions, a serverless orchestration tool, to streamline the steps involved in preparing and loading text data for scoring. Within the workflow, AWS Step Functions automatically calls to receive, clean, and convert text data to vector space, as well as initiate the scoring model powered by machine learning.

CGR's new scoring model first analyzes the text in a specific job description. Then, it analyzes thousands of CVs, scoring each for relevancy against the target vacancy. Resumes that closely align with a particular job description achieve a score around 1. Those that don't align receive a score near 0. After the scoring process is complete, all data is written to CGR's database and is available for use. Then, the model returns a ranked list of candidates. CGR users can use this list to validate results starting with the best potential applicants for certain job openings.

The Benefits

With ClearScale's help, CGR was able to implement a sophisticated automated scoring system that accurately calculates the alignment between job vacancies and CVs. The system also presents matches in rank order to CGR employees, making the work of finding good candidates for certain openings much easier.

Furthermore, CGR's scoring system will grow more accurate over time, as the consultancy's pool of resumes and job descriptions increase in size. As a result, CGR will save more time and money over the long run. In addition, the company is well-positioned to scale with demand and provide fast services to both corporate and individual end users.